A Lecture
ON THE
PHYSIOLOGY AND PATHOLOGY OF THE OLFACTORY NERVE.

Delivered at the Hospital for Epilepsy and Paralysis, Regent's-park.

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(Concluded from p. 773.)

IF odorous substances are to be perceived, the nose must not be dry, for it is the nasal mucus which absorbs odoriferous molecules from the atmosphere, and brings them in contact with the olfactory cells. Anything that tends to check the secretion of mucus, such as extremes of heat and cold, the inspiration of dusty air, and the first stage of a cold in the head and the nose, will cause diminution or loss of smell. Persons who have habitually a dry mucous membrane can only smell well when there is a great deal of moisture in the atmosphere. But there must be no excess of mucus, which is equally prejudicial to olfaction. This is seen in the second stage of a cold, when the membrane is swollen and in a state of hypersecretion. Too much mucus not only prevents mechanically the access of odorous particles to the terminal branches of the nerve, but also macerates the olfactory cells, whereby the excitability of the nerve is diminished. Sneezing and blowing the nose may, under such circumstances, restore smell by clearing away a physical impediment.

In ordinary quiet breathing only little air enters the olfactory channel, for most of it passes through the posterior nares into the pharynx. If we, therefore, intend to smell keenly, we instinctively resort to the use of either the dilator muscles of the nose, whereby the passage is enlarged, or of the compressors, by means of which we sniff. The latter way is even more effectual than the former, for during sniffing the agger nasi is squeezed against the septum, and the respiratory channel is closed, so that the air is obliged to pass through the narrow groove leading to the olfactory cells. In facial palsy from disease of the portio dura the dilators as well as compressors of the nose lose their power, which is the reason why smell is lost in that affection on the side of the lesion.

The sense is also impaired or lost in chronic inflammation and thickening of the membrane, whereby the olfactory channel is obstructed; and in polypus, other tumours, and foreign bodies in the nose. Adhesion of the soft palate to the posterior wall of the pharynx has the same effect; a free incision into the palate will, in such cases, restore the smell at once.

The specific stimulants of the olfactory nerve are odorous substances, which must be either in the form of gases or capable of being changed into gases. Such substances give off exceedingly minute particles, which form a kind of atmosphere, the density of which diminishes in proportion to the distance from the substance. These particles, on coming in contact with the olfactory membrane, cause a peculiar vibration in the molecules of the nerve, which is transmitted to the olfactory centre in the brain, where it is appreciated.

A classification of odours is very difficult. Haller, the great physiologist, distinguished them into pleasant and unpleasant; but this appears unsatisfactory, as some people detest odours which are relished by others. The smell of assafœtida is horrible to most of us, yet it was used as a perfume by the ladies of the Roman empire; and in Afghanistan, from where it comes, it is called "scent for the gods." The Siamese are said to be fond of the smell of rotten eggs, and sportsmen enjoy the smell of the stable. The division of odours into mineral, vegetable, and animal is likewise not a good one, for the odour of musk is found not only in the animal Moschus moschiferus, but also in the plant Rosa moschata, and in some earthy substances; Japanese teapots are impregnated with it. The best classification appears to me that which has been proposed by Frölich, who distinguishes odours acting purely on the olfactory, such as essential oils, resins, and balsams; and others acting likewise on the fifth nerve, such as iodine, bromine, chlorine, nitric and acetic acids, ammonia, horseradish, mustard, &c. The former act simply as odours, while the latter irritate the mucous membrane of the eyes, nose, and throat, and cause lacrymation, sneezing, and coughing.

Professor Tyndall has struck out a new line of research by investigating the effects of odours on radiant heat, which he has found to be a more refined test than any other. Assuming the absorption of one atmosphere of dry air as unity, he found that perfumes intercepted many times the quantity absorbed by the air, and that the rate of absorption varied from 30 for patchouli to 372 for aniseed, intermediate numbers being found for sandalwood, geranium, oil of cloves, attar of roses, bergamot, neroli, lavender, lemon, portugal, thyme, rosemary, oil of laurel, camomile flowers, cassia, and spikenard. Thus, it was shown that—

> "The sweet South,
> That breathes upon a bank of violets,
> Stealing and giving odour,"

owes its sweetness to an agent which, although almost infinitely attenuated, may be more potent as an intercepter of terrestrial radiation than the entire atmosphere from "bank" to sky.

That the olfactory nerve is sometimes *congenitally absent* has already been noticed. Breschet has seen this peculiarity to run in a family. The patient under his care had inherited it from his father; he had an aversion to flowers, and disliked to see them on the person of a woman. He had an antipathy to gardeners and botanists; yet he was able to perceive the emanations from cesspools—namely, ammonia and sulphuretted hydrogen, and he was in the habit of taking mustard and snuff.

We know *atrophy* to be a common affection of the optic nerve; indeed, this is one of the principal amongst the early symptoms of locomotor ataxy. The same pathological process appears occasionally to invade the olfactory, more especially in the aged, where smell is impaired or lost, and sclerosis of the nerve has been discovered after death. This wasting appears to affect chiefly the external root, which is traced to the fissure of Sylvius, and which seems to be more important for olfaction than the middle or internal root.

Loss of pigment in the skin of the body has been noticed by Dr. Hutchison, of Kentucky, in a negro boy, to coincide with loss of smell; and this case has provided Dr. W. Ogle with a text for remarks on the importance of pigment for olfaction. We have already seen that the presence of colouring matter in the olfactory cells is really dependent upon the integrity of the nerve, and that after destruction of the latter the pigment disappears. It is therefore more in consonance with physiological facts to assume that this absence of pigment is not of itself a cause of anosmia, as Dr. Ogle would lead us to believe, but simply a consequence of withdrawal of nervous influence. Anœmia and loss of pigment have therefore to be looked upon as symptoms of a pathological condition, but do not stand in the relation of cause and effect.

I lately had an illustrious person under my care who is an Albino, and devoid of colouring matter in the hair and iris. In early life he had had great difficulty in reading, and had been warned by oculists whom he had consulted that he would lose his sight altogether if he continued to read much. He eventually constructed for himself a very simple and ingenious contrivance by means of which the rays of light were made to fall on the retina through an exceedingly minute aperture; and with this little instrument he has managed for many years to read all day long without fatigue. His smell and taste had never been very keen; and when he was about sixty-three years of age he lost them altogether. No accident or other obvious cause had given rise to this affection, and I therefore looked upon it as ultimate atrophy of a nerve which had never been highly developed, and consequent complete loss of any small quantity of pigment which might previously have been present in the sensorial cells of the nerve.

Injury to the head may give rise to anosmia from rupture of the olfactory nerves as they pass through the foramina of the ethmoid bone. In this place the nerves are exceedingly soft, and therefore particularly liable to be torn, while in the nose they have more power of resistance, from being invested with a sheath which is a continuation of the dura mater. The brain matter adjoining these nerves may therefore, on account of its greater firmness, escape laceration, so that the only symptom after an injury to the head may be

loss of smell. It seems singular that it should generally be a blow or fall on the *back* of the head which causes rupture of these nerves, as they are situated in front. The injury acts, indeed, more by contrecoup than by direct violence; and that the anterior portion of the brain should be more liable to suffer in this way than the posterior is owing to the fact that the former is situated directly on the depressed and elevated surfaces of the cranial bones, which here present great irregularities in their shape, while the posterior lobes rest on a soft cushion, the tentorium cerebelli, whereby they are effectually protected.

Excessive stimulation may temporarily or permanently destroy the excitability of the olfactory nerve. It is related of Marshal Richelieu that he habitually lived in an atmosphere of the strongest scents, which made his visitors quite ill, while he was himself ultimately quite unaware of them. Scavengers, dustmen, and tallow-boilers become after a time insensible to the disgusting odours surrounding them, anatomists to the smell of the dissecting-room, and patients suffering from cancer to the emanations from their sores. But even true anosmia, or insensibility to *any* odorous substances, may thus be produced. Graves has recorded the case of a captain in the Yeomanry, who in the Irish rebellion of 1798 had to superintend the work of emptying out an old cesspool which was filled with the offscourings of the market and all manner of filth, and on the bottom of which 500 pikes were reported to have been concealed, and were actually discovered. He was all this time exposed to most abominable effluvia, and suffered greatly from the stench. Next day he found that he had entirely lost his smell, and thirty-six years afterwards, when Graves examined him, the anosmia still persisted. A similar thing happened to a surgeon at Bremen, in Germany, who had to make the post-mortem examination of an archbishop who had died of cancer of the stomach. The fearful emanations arising from the body of this dignitary of the church destroyed the surgeon's smell for life. Such cases are analogous to those of blindness from exposure to a too intense light, and deafness from explosions at close quarters. The pathology of these conditions has not yet been investigated, but I deem it probable that they are owing to capillary hæmorrhage in the nerve.

Inflammation of the olfactory nerve would appear to be an exceedingly rare occurrence, which seems singular if we consider the frequency of optic neuritis. The latter occurs almost invariably when the intracranial space is reduced by tumours, but such a condition does not seem to affect the first pair in a similar manner. The only case of acute olfactory neuritis which has as yet been placed on record occurred in a patient who was some years ago under my care at the hospital, and who suffered from an advanced stage of locomotor ataxy. He was a banker's clerk, aged forty-eight, married, and father of two children, and had been in good health until eight years before admission, when, apparently from having been exposed to cold draughts at his office, he began to feel numbness in his feet, and in walking it seemed to him as if he was treading on india-rubber or cotton. About the same time he was startled by perceiving a strong smell of phosphorus, which never left him for six weeks, and overpowered all other accidental smells. At the end of that time he noticed that he had become entirely insensible to odours of any description. I tested the patient with camphor, valerian, ether, opoponax, and a variety of other strong scents, none of which he was able to perceive. When allowed to sniff ammonia he experienced the usual sensations of tickling in the nose, choking and lacrymation, and snuff made him sneeze. The nasal twigs of the fifth nerve and of the spheno-palatine ganglion were therefore shown to be in their normal condition. The patient tasted sugar, salt, quinine, and acids, but the perception of flavours in eating and drinking was entirely gone. When his eyes were bandaged he was unable to distinguish between stewed onions, apples, and turnips which were given him, but he could tell the difference between roast beef and mutton by the tactile sensibility of the tongue. He did not perceive the flavour of wine; claret tasted to him like weak vinegar and water, and port wine as spirits and water. The patient died of collapse some months after admission, and Dr. Ferrier, who was then my colleague at the hospital, made the autopsy. There were found the naked-eye appearances of neuritis of the first pair at the base of the brain, and the specimens were removed and handed for microscopic examination to the late Dr. Lockhart Clarke, who was then likewise physician to the hospital. Unfortunately that gentleman died soon afterwards, and I have not been able to trace the specimens, which is much to be regretted in a case of such extreme rarity. That this, however, really was a case of acute olfactory neuritis seemed evident from the symptoms which were observed during life. There was at first a stage of sensorial hyperæsthesia which, after having lasted for six weeks, merged into complete anæsthesia of this special sense. This corresponds closely with what I have observed in neuritis of the fifth nerve, where there is likewise a first stage of hyperæsthesia, as evidenced by severe pain in the parts supplied by that nerve, and lasting for five or six weeks, after which complete anæsthesia of the face and motor paralysis of the muscles of mastication set in. The perception of the smell of phosphorus, which this patient had had for six weeks consecutively, I attribute to the circumstance that the olfactory nerve responds to stimulation other than by special odoriferous substances, by perception of this peculiar smell. I have already spoken of this symptom when treating of the galvanic excitability of the nerve, and the case just related seems to show that it is also caused by irritation of the nerve through hyperæmia and inflammation, similarly as in retinitis flashes of light are perceived by the patient.

I have reason to believe that *chronic olfactory neuritis*, leading to loss of smell, occurs in syphilitic patients, together with affections of other nerves at the base of the brain.

Tumours growing at the base, and irritating or destroying the first pair, will cause, first, hyperosmia, and afterwards anosmia. Lockemann has described the case of a woman who complained of horrible smells which nobody else could perceive, and also suffered from vertigo and epileptiform convulsions. The smells ceased after a time, and it then appeared that the patient had lost the faculty of smelling on the left side. The other symptoms gradually increased in severity, and the patient died. On inspection a sarcomatous tumour was discovered in the left frontal lobe of the brain, which had completely destroyed the olfactory tract on the same side.

Finally, disease of the *olfactory centre* in the brain may unduly exalt or destroy smell. That such a centre exists had been suspected for a long time, and pathologists sought it near the fissure of Sylvius and the island of Reil, and in close proximity to Broca's convolution, for anosmia has been found associated with aphasia and right hemiplegia from embolism and hæmorrhage. In such cases the loss of smell is unilateral, and confined to the side of the lesion. We have therefore right hemiplegia and left anosmia. This apparent discrepancy is satisfactorily accounted for by the circumstance that there is no decussation of the olfactory paths in the anterior commissure which joins the temporo-sphenoidal lobes, and smell is, therefore, appreciated on the same side on which it is perceived. Experimental physiology has gone a step further in localising the seat of the olfactory centre more definitely. Dr. Ferrier finds it in the tip of the temporo-sphenoidal lobe, or the subiculum cornu Ammonis, which appears likewise to contain the gustatory centre. Faradisation of this part in animals is followed by a sniff, which is evidently the outward expression of the excitation of subjective olfactory sensations. Destruction of this part seems to cause loss of smell, and Ferrier's view is supported by the circumstance that this structure seems to be particularly developed in animals which have a very keen sense of smell. Yet Munk, who has likewise investigated the relations of the cerebral cortex to the special senses, has come to entirely different conclusions, so that the question must still be considered to some extent an open one.

Diseases of the olfactory centre have not yet been much studied. It seems rational to assume that the hemi-anosmia of hysterical women, which is part and parcel of the hemi-anæsthesia from which they are so apt to suffer, is owing to a neurosis of this centre. The olfactory hyperæsthesia which is so frequently seen in certain forms of insanity, hysteria, and as a premonitory sign of epileptic attacks, no doubt arises from undue excitability of the nerve-cells in the olfactory centre, which gradually spreads to the cells of the motor convolutions and tracts, and ends in a convulsive epileptiform seizure.

The *treatment* of anosmia and hyperosmia remains to be considered. Of course, where the nerve is torn or destroyed, we cannot hope to remedy the mischief which has been done; yet cases occur from time to time in which treatment may be useful. There are two medicines which have a decided and antagonistic influence on olfaction—strychnia will exalt, while morphia will impair and deaden it. Strychnia applied

locally to the mucous membrane of the nose as a snuff, or taken internally in a suitable dose, wonderfully increases the keenness of the sense, the local application being the more effective of the two. Smaller quantities of scents are perceived, and their impression is more precise and pleasant. The sensitiveness to pungent odours is so much increased that snuff, ammonia, and acetic acid cause positive pain. It therefore appears that the excitability of the fifth nerve is likewise exalted. Morphia, on the other hand, has only insignificant effects when applied as a snuff; but if taken internally, and more especially if injected subcutaneously, confuses the appreciation of odours to such an extent as to produce a kind of chaos. Smell is not actually destroyed, but the odours appear, as it were, at an enormous distance, although the bottle containing them may be held right under the nose. The olfactory nerve is, in fact, narcotised.

Most other medicines which have an influence on olfaction act indirectly, and do so by altering the condition of the fifth nerve. Thus atropia and daturine cause great dryness in the mucous membrane, more particularly when injected subcutaneously. This interferes with smell, as has been pointed out above. The effects of pilocarpine on olfaction have not yet been studied, but will most probably be found antagonistic to those of atropine.

In anosmia I therefore prescribe one-twenty-fourth of a grain of strychnia mixed with two grains of powdered sugar, to be used as a snuff twice a day; and I increase the dose to one-sixteenth and one-twelfth of a grain should no effect be produced. In the hyperosmia of epileptic patients, when preceding attacks, I inject one-sixth of a grain of the acetate of morphia with one-sixtieth of a grain of the sulphate of atropia subcutaneously. This soothes the explosive tendency of the nervous centres, and acts as a preventive of epileptic attacks.

Electricity has been recommended by Erb and others for the treatment of anosmia; but as I have shown that the first pair is only influenced by a current of extreme power which would do harm in other ways, I warn you against the use of such a remedy for such a disease. Where syphilis is suspected or recognised iodide of potassium should be given.

In conclusion, I must say a few words on the *diagnostic importance* of certain smells in the sick-room, which was formerly much insisted upon; indeed, whole treatises have been written on the recognition of disease by sniffing. Dr. Heim, who was the popular physician of the day at Berlin some fifty years ago, recognised measles, scarlet fever, and small-pox by their peculiar smell on first entering a house, and before having seen the patient. Mr. Bernard of Upton Park has recently recorded in THE LANCET two cases of small-pox in which the patients themselves perceived a dreadful smell, apparently just at the moment of being exposed to contagion; and one of them when suffering from the eruption said that his perspiration had the same smell as that which made him sick before. When attending Skoda's clinique in Vienna, twenty-five years ago, I noticed that this celebrated teacher was in the habit of sniffing when approaching the bedside of patients suffering from the last stages of pneumonia, phthisis, typhoid fever, &c.; and he would give a bad prognosis when he perceived what he called the "cadaverous smell." Mr. Crompton of Birmingham has noticed a peculiar earthy smell from the body a week or a fortnight before death, which, he says, has never deceived him—an appropriate illustration of the saying, "Earth to earth." Dr. Begbie distinguished typhus and typhoid fevers by the sanguineous (others call it "mousey") smell of the former. Professor Parkes has noticed a peculiar odour in the skin of cholera patients. A pungent smell in the chamber of a lying-in woman shows that lacteal secretion is well established, while an ammoniacal smell has been said to indicate the approach of puerperal fever. Many women emit a peculiar odour while menstruating, which resembles a mixture of blood and chloroform; and this is believed to arise not so much from the discharge as from the more pungent character of the sweat secreted in the axilla. Persons of costive habit have a fecal smell; and this is also often noticed in hypochondriacs and lunatics. In uræmia, whether owing to kidney disease or to severe retention of the urine, a urinous odour is emitted by the body; and the presence of pus in some part of the body has been recognised by a peculiar warm-milky smell of the patient.

Apart from the odour of the sick-room and the body generally, the smell of the sputa, urine, fæces, sweat, ulcers, &c., was carefully noted by the older practitioners, and utilised for prognosis and treatment. Unquestionably there was much that was fanciful in such ideas; but occupied as we are at present with the study of more precise and definite symptoms, we have, perhaps, gone to the other extreme in neglecting such signs altogether. Everybody has his own special odour, and this varies according to the circumstances of life, the food taken, and the state of health in which he happens to be. That it should be altered in disease, and that special diseases should have special odours, is only what one would expect; yet the increase of cleanliness and ventilation has no doubt done away with a large variety of smells which formerly used to assail the nostrils of the physician.

Are odours of any medicinal value? This may well be doubted. The vapour of hellebore has been used for purging, that of crocus and hops for procuring sleep, and the emanations of burnt feathers and wool for combating hysterical fits; but no doubt the imagination was largely influential in the production of any such effects. Chloroform, ether, ammonia, and similar substances, which have a definite physiological action, can hardly be looked upon as odours. On the other hand, it is certain that strong scents may be hurtful, more especially the sweet ones, such as those of lilies, violets, narcissus, nerium, oleander, and lobelia; and these, again, chiefly in nervous and hysterical women, in whom headache, dizziness, fainting and convulsive fits have thereby been caused. Yet we would hardly go so far as Pope, who considered it within the bounds of female delicacy to

> "Die of a rose in aromatic pain";

or the German poet Freiligrath, who in his beautiful stanzas, "Der Blumen Rache," makes the spirits of flowers torn from their beds rise in the night and kill the maiden to whom they had been offered:

> "Blumenduft hat sie getödtet!"

Indeed, we may safely rely on being able to combat any of the accidents or symptoms just mentioned by a very simple expedient—viz., opening the window.

A STUDY OF THE PATHOLOGICAL PHYSIOLOGY OF CONTRACTURES.[1]

BY DR. CHAS. RICHET.

IN order to become thoroughly acquainted with the physiology of muscle, it is necessary to study the morbid phenomena it exhibits, for physiology and pathology lend each other mutual support, each with its different method arriving at the same result—viz., the knowledge of the properties of muscular tissue and its relations with the nervous system. Let us, in the first place, refer to that physiological phenomenon described by M. Tiegel, under the name of *contracture*. If a fresh muscle, stretched by light weights, be stimulated, and if the stimulus be very strong, the contraction is continued for a very long time. Instead of having a simple shock analogous to that which is figured in all the classical works, where relaxation is nearly as rapid as contraction, there will be a very sudden contraction and a very slow relaxation; often, indeed, the relaxation will be *nil* and the state of contraction persist indefinitely. Again, certain muscles, when stimulated for a long time by powerful induction currents, are not relaxed, and remain contracted even when the stimulus has entirely ceased. This form of contraction thus passes into cadaveric rigidity. There is no intermediary between contraction—the active phenomenon, and rigidity—the phenomenon of the death of muscle.

But these facts cannot so far serve to give a definition of the pathological phenomenon of contracture. It is likely that there is a relation between these physiological contractures, produced by strong stimuli, and the contractions seen in certain patients; but it is as yet hypothetical to frame an analogy, and it is not suitable to introduce these physiological ideas into the definition of contracture. We may define it as a state of shortening of the muscular fibre which can no longer be relaxed by the influence of the will. In saying muscular fibre, we imply that retractions due to

[1] Lecture delivered at the Paris Faculty of Medicine: Auxiliary Class of Physiology.

sclerosis must not be included with contractures, for the former are fibrous indurations, such as we observe in certain cases of chronic myositis, where there is a shortening of the whole muscle. Let us first examine in what cases contracture is observed.

In cerebral or medullary affections there is contracture when the lesion is seated in certain motor regions of the cord. The important works of M. Charcot and of his pupils, especially Brissaud,[2] have determined in what cases these contractures are produced. In hemiplegia there are primary contractures, due probably to cerebral compression, and late contractures, due to degenerations of the cord. This degeneration involves the pyramidal fasciculus. In lateral sclerosis there is also observed a lesion in the white columns of the cord which determines the contracture. Thus, certain medullary lesions can provoke contracture, either of a limb or of one side of the body. It is probable that it operates not by suppression of action, but by irritation. It is because the cord is excited that the muscle can thus contract. Contracture is the analogue of hyperæsthesia; when the motor part of the cord is excited there is contraction; when the sensory portion, there are pain and hyperæsthesia.

Contractures are met with in many other diseases of the cord, and may all be explained in the same manner; the exaggerated excitability of the cord leads to contracture of the muscles. Somewhat analogous phenomena may be obtained experimentally on animals. Yet it is not simply by acting on the cord, but by stimulating certain parts of the brain, either the ventricles, as M. Cossy has done, or the cerebral cortex as MM. Rochefontaine and Viel, that contractures are obtained, transitory, it is true, but sufficient to establish the alliance between the facts of experimentation and those of pathology.

To sum up, we have a first series of contractures due to inflammation (chronic or acute) of the cord or the brain.

There is a second physiological process by which contractures are established. In the normal state there is a direct synergy between certain sensory nerves and certain muscular nerves, so that the stimulation of the sensory nerve provokes in the cord an immediate reflex on the motor nerves of the muscle. This hypothesis, which J. Müller propounded at the outset of the study of reflex movements, has been confirmed by a multitude of observations. Thus, the sensory nerves of mucous membranes, when stimulated, provoke contraction of the muscles adjacent to these mucous membranes; the conjunctiva, for example, when touched excites a reflex of the eyelids. Suppose that there has been on one of these mucous membranes a constant stimulation, as that which is produced by a burn or ulcer, there will then be a tendency to contraction of the orbicular muscle, as, in fact, is seen in a large number of cases. One knows that ulcerations of the conjunctiva determine spasm of the orbicularis; ulceration of the ureter a spasm of the muscular membrane of this canal; fissures of the anus a contraction of the anal sphincter, &c. Caustic injections into a joint of a guinea-pig or of a dog determine contracture of the muscles bordering on the joint. M. Valtat has made some exact experiments bearing on this, and he has seen arthritis determine firstly contracture, then atrophy of the muscles. Even on the cutaneous surface a painful stimulus may give rise to a kind of contracture. That is seen on the lower limb following ulcers &c. These latter facts establish a natural transition between contracture properly so called and the other varieties of spasm or convulsion of muscle (tetany, local tetanus, &c.). Inflammation and traumatic irritation of nerves produce contracture by the same mechanism—viz., by over-exciting the reflex activity of the cord.

We have then a second variety of contracture—contracture due to a prolonged peripheral stimulus.

There is a third class of contracture, observed in hysteria, and also beyond every morbid state in certain physiological or individual conditions. In hysteria there is very likely an increase in the activity of the cord, together with an abeyance of action of the higher nerve centres. Physiological experiments have shown that in separating the cord from the brain reflex medullary action is over-excited, as if there were in the brain moderating centres of reflex actions. Again, among hysterical subjects contractures are very frequent. So are they in the somnambulic state, which in so many points resembles hysteria. Hence this third class of contractures, which depend on an absence of action of the central nervous system.

In all cases the muscle may be contracted when the cord becomes over-excited. It is then a manifestation of the exaggerated activity of the cord, and it is necessary to study this condition with more detail.

It is admitted that in the normal state the muscle is linked to the nerve-centres by two kinds of nerves—a centrifugal motor nerve and a centripetal sensory nerve. These two nerves reach probably a very limited region of the cord, and the reflex from one to the other is very readily accomplished. All occurs as if there were a sensory nervous current constantly passing up to the cord from the muscle to determine a reflex on the same muscle. The descending nervous influence towards the muscle puts its tonicity into play. One knows that when the nerve of a muscle is cut the muscular fibre is relaxed (Brondgeest), and that its chemical actions diminish, so that the venous blood becomes redder (Claude Bernard). Suppose, then, that the cord is over-excited, the tonicity will have another character. Instead of being a state of semi-relaxation of the muscle it will be its prolonged contraction—in other words, its contracture. Thus the tonicity of the muscle is sometimes *nil*, as when all the nerves are cut; sometimes normal, as in the healthy individual, where there is a harmonious equilibrium between the different antagonistic muscles; sometimes exaggerated, as in hemiplegia and hysteria. Ultimately we reach this conclusion for the cause of contracture, that it is the state of exaggerated tonicity of the muscle.

One may demonstrate readily that of all the sensory stimuli which can provoke contraction by reaching the cord, it is the sensory excitation of the muscle itself which is most apt to determine contraction. Every strong muscular contraction is a sensory excitation of the muscle. Thus, in hysterical subjects it is sufficient for them to make an energetic movement in order to produce a contraction. The muscle which has been strongly contracted can no longer be relaxed, and remains contractured. The same result is attained by kneading, or exerting strong pressure on the muscular fibres. In the hypnotised, even in the first degree of somnambulism, the aptitude to contracture is quite as marked. Some individuals, even apart from the hysterical or somnambulic state, are subject to contractures or cramps consecutive to a rather feeble muscular contraction. That is doubtless a question of a more than ordinary medullary excitability. In the researches which I have undertaken with M. Brissaud upon this subject, we have found that excitation of the tendon had a directly opposite effect to contraction of the muscular fibre itself. Palpation of the muscle determines contraction, but palpation of the tendon determines its relaxation. Thus, the strongest contractions provoked are relaxed as one palpates more or less strongly the tendon of the contractured muscle. It all takes place as if the tendinous nerves were nerves of arrest, serving by an inhibitory action to make the contraction of the muscle cease.

The physiological state of the contractured muscle may be ascertained by different methods of investigation. If we introduce fine needles into the muscle and ascertain its excitability during relaxation on the one hand, and on the other during contraction, we do not ascertain notable differences. But if we try to take a myographic tracing of contractured muscles, we see that in spite of its extreme shortening the muscle excited by electricity can still shorten. Contracture is not then the maximum of shortening of the muscle, and the myographic line of the tracing occupies a level intermediate to contraction and flaccidity. Another method of exploration is founded on that very old idea of physiology, that the irritability of a muscle is only called forth if the muscle is traversed by oxygenated blood; whether the lack of oxygen or the products of denutrition accumulated in its tissue exert a baneful action on its contractility. Now, if we completely anæmiate a limb by applying methodically around it Esmarch's elastic bandage, at the end of five to six minutes the contracture will disappear; voluntary movements will be longer preserved, and at the end of about half an hour they will have disappeared. The electrical excitability only ceases at the end of an hour and a half. Thus there is in the excitability of the muscle this gradation—that excitability to contracture disappears the first; then excitability to voluntary movements; then excitability to electric action. If we remove the bandage from the muscle thus relaxed, immediately the blood flows into the muscle the contraction will return with

[2] Recherches Anatomo-pathologiques et physiologiques sur la Contracture permanente des Hémiplegiques. Paris, 1880.

as much if not more force than before. There was, then, in the relaxed muscle a true latent contraction. Whatever may be the explanation of this paradoxical phenomenon, we think that it indicates with sufficient exactitude this fact, that the muscle was strongly excited by the motor nerve and the cord; and that if it did not respond to this excitation by a contraction, it is because being deprived of blood, it could no longer become contractured. One may then say that this anæmiated muscle, not responding to neuro-medullary excitation, was in a state of *latent contracture*.

In hemiplegia the application of Esmarch's bandage dispels the contracture, as in hysteria. In certain cases, however, where there are old deformities or fibrous retractions, the limb does not return to its primitive position. By another mechanism chloroform makes contracture disappear—viz., by abolishing the activity of the cells of the cord. It is difficult to say if contracture is an active or passive state of the muscle. Researches have been made, but they are not very conclusive. M. Onimus fancied that he had been able to establish this distinction between the active or passive state of the muscle on the following grounds. If two needles in communication with a galvanometer be introduced into two healthy muscles at rest, the needle of the galvanometer undergoes no deviation; if one of the muscles contracts, it will become negative in relation to the muscle at rest, which is positive, and a current will be established, causing a deviation of the galvanometer. Now, a contractured muscle does not present this phenomenon. The observation of M. Onimus does not seem to me very well founded, for it is a change in the electric state which makes the galvanometer deviate, and this change can only take place if there is a change in the physiological state of the muscle.

Brissaud and Boudet by employing the myophone have found that the contracted muscle produces a rolling bruit (rotatory bruit, muscular sound), whilst the contractured muscle only produces a very weak and irregular bruit. It seems that the muscular fibres contract, the one after the other, incessantly reinforcing each other; some stronger, others weaker.

Brissaud and Reynard have also sought to establish if there was by the effort of contracture an increase of temperature; and, instead of finding hyperthermia, as in every strongly contracted muscle, they have found rather a diminution of temperature by some tenths of a degree in the contractured muscles of hemiplegics.

The argument has also been raised that the muscle cannot remain contracted for more than half an hour without there being enormous fatigue, and yet we see contractures persist almost indefinitely without the patient experiencing the least lassitude. In truth, that does not prove the passive state of the muscle; it only indicates that in voluntary contraction there is an effort which fatigues. We do not yet know the cause even of this fatigue. The experiments of Ranke in injecting lactic acid are nothing less than convincing in attributing the cause of muscular fatigue to an exaggerated acidification of the muscle. If, then, there is no fatigue in contracture, it is very probably because of the absence of voluntary effort much more than on account of the passivity of the muscle.

The analysis of different physiological states of the muscle, which are like transitions between the normal state and the state of contracture, may help us perhaps to define the state of the muscle.

Catalepsy is a feeble contracture. Once contracted, the muscle is no longer relaxed; but whilst there must be a very great force to overcome the resistance of a contractured muscle, a very feeble force suffices to conquer the resistance of a cataleptic muscle, and catalepsy might be defined as a feeble contracture.

Let us refer to the definitions given by physiologists of the physical properties of muscle. They have distinguished extensibility—viz., the property of being stretched by a weight; and elasticity, the property of returning to the normal position after the removal of the weight.[3] Thus a normal muscle is extensible and elastic. But if we divide its nerve, in consequence of the suppression of nervous action the muscle becomes more extensible. When we destroy the tonicity of the muscle, we increase its extensibility. The contractured muscle, on the contrary, has a minimum extensibility, and the heaviest weights can no longer stretch it; in other words, its elasticity is very strong. As to the cataleptic muscle, its extensibility is weak, but its elasticity is *nil*—in this sense, that after having been removed from its primary position it can no longer return to it. We may, then, from a purely physical point of view, define contracture to be a state of the muscle in which the extensibility is weak or *nil*, and the cataleptic a state of the muscle in which the elasticity is weak or *nil*. In truth, that does not indicate whether during contracture there is an active or passive state of the muscle; we do not know this in the case of normal contracture—how could we then know it in the case of a pathological phenomenon?

[3] M. Marey calls extensibility what physicists designate feeble elasticity. A very extensible muscle is a feebly elastic muscle; but these terms, feeble or strong elasticity, complete or incomplete, serve to confuse those who are not familiar with the physical sciences.

NOTES ON ABSCESS OF THE LIVER.

BY SURGEON-MAJOR M. C. FURNELL, M.D., F.R.C.S.,
SANITARY COMMISSIONER, MADRAS; LATE SENIOR PHYSICIAN, MADRAS GENERAL HOSPITAL.

I VENTURED in THE LANCET of November, 1878, to express my opinion of the superiority of opening abscesses of the liver by incision, followed by the use of trocar and cannula, especially if accompanied by antiseptic precautions, over the aspirator, and I strengthened the opinion thus expressed by giving some cases. I now add a few more.

CASE 1.—R——, aged forty, a brass-smith, admitted on May 28th, 1878; an emaciated man, of intemperate habits, with a round swelling, occupying the whole of the right half of the abdomen, descending as far down as the iliac fossa, said to have gradually enlarged for the last ten days. The patient states that about five days before the swelling appeared he had an attack of fever which left him as soon as the tumour made its appearance. The tumour is about the size of a cocoa-nut, and no pulsation can be felt in it, neither can any bruit be heard. I will omit for brevity sake the systemic examination as given in the case-book.

May 29th, 1878.—The patient is much in the same condition this morning; pulse slow and feeble; respiration hurried; fluctuation in swelling distinct; it was, consequently, determined to evacuate the abscess. The patient was placed under chloroform, when an incision was made immediately below the right costal cartilage, and a large trocar introduced, giving exit to about twenty ounces of purulent stinking fluid. The wound was kept open by a strip of lint, steeped in carbolic oil, introduced through the cannula before its withdrawal, and the wound dressed antiseptically. It would take up too much space to give each day's entry; suffice it to say the man recovered without an untoward symptom, gained flesh and strength, and was discharged quite well on June 22nd.

CASE 2.—A. H——, Esq., a coffee planter, admitted July 29th, 1879. History: Came to India in 1863, and enjoyed good health until 1869, when he was attacked with inflammation of the liver, which ended in abscess; for this he was sent home and the abscess was opened by Sir Wm. Jenner, and he made a good recovery. There is puckered cicatrix in the epigastrium, but the patient states that although his medical attendants in this country said it was an hepatic abscess, the distinguished physician who opened it in England was not of that opinion. Whatever it was he completely recovered, and came out again to this country. In 1875 he again was obliged to return to England, this time on account of some injury to his eye. He returned to India, and early in 1876 he suffered from malarial fever and hepatic congestion, from which he recovered. He remained fairly well until May, 1879, when he suffered from an acute attack of dysentery which was followed by acute lancinating pain in the right hypochondrium, accompanied by shivering fits, fever, and night sweats. He treated himself with calomel and counter-irritants; but obtaining no relief, he applied to Dr. Benson at Shimoga, who sent him on to the General Hospital, Madras. His state on admission, as taken from the hospital note book, was as follows:—

Circulatory system.—Extent of cardial dulness normal; heart's sounds natural, action regular; pulse 62 per minute.

Respiratory system.—Thorax well developed; expansion equal; respiration slow, full sixteen per minute. Nothing abnormal detected on percussion or auscultation.

Nervous system.—Patient complains of pain in the right

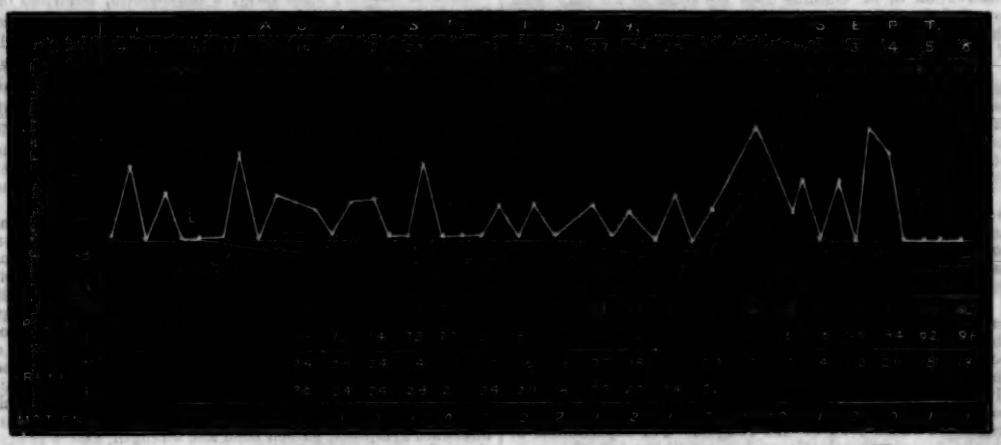
hypochondrium, increased on pressure or when patient lies on his right side; sleeps fairly at night.

Digestive system.—Tongue slightly furred, white; appetite fair; bowels moved thrice in the twenty-four hours, motions loose; splenic area normal; area of hepatic dulness extends from the sixth rib to two inches and a half below the costal margin; there is a slight bulging in the right hypochondrium, tenderness on pressure; no fluctuation can be detected.

Integumentary system.—Skin cool and moist; slight œdema over swelling in hepatic region; temperature normal morning and evening on day of admission. Treatment: The nitro-muriatic acid mixture, foot-baths, and pads to side.

I attach his chart, from which it will be seen that the patient did well for sixteen days after admission—that is, there was no hectic fever, the appetite was good and the usual functions of the body were normal in action. The patient was about, and went out in the evening in a carriage. There was no indication for any surgical interference, and he was strongly recommended to proceed to England. This, however, he declined to do. On Aug. 13th, he complained of slight pain in the swelling, and more especially when lying on the left side; temperature normal. Next day the pain was worse, and the temperature went up to 100°. He admitted having dined well, and taken a fair share of wine a night or two back, when dining with a friend. From this time forward the history is—daily attacks of pain in abscess, and, as will be seen from the chart, some hectic. On the 20th the abscess was opened in the usual way described in these papers, giving exit to about three ounces of laudable pus, with a quantity of blood of a dark colour. It was dressed in the usual manner, the aperture kept open with a strip of carbolised lint and antiseptic dressing used. During the 22nd the dressing, which had been put on at the morning visit, became deranged, and a medical officer on duty dressed the wound. This gentleman had been all the morning engaged in a post-mortem examination. The next day the edges of the wound had a distinct blush, and the parts looked angry. This gradually disappeared, and he did fairly well, but the abscess continued to discharge very freely, and as the weather was almost insufferably hot, it was thought he would do better if sent away to sea. The following are the two last entries in the hospital case-book:—Aug. 5th: Temperature yesterday evening and this morning normal; pulse 92, full; slept well after the night draught; tongue slightly furred towards the centre; appetite good; bowels moved once in last twenty-four hours; stools said to be scanty and watery; abscess doing well. To continue treatment and diet.—Aug. 6th: Had a sleeping draught last night; tongue slightly furred; appetite good; bowels moved once during the night. Temperature yesterday evening and this morning normal. Continue treatment.

Aug. 7th.—Embarked for England eighteen days after the operation. I saw a letter from the patient, written in Suez, in



which he spoke of himself as better, but he reached England only to die a day or two after arriving home. The ship's doctor, from whom I subsequently heard, reports that the discharge became very profuse on board ship, and the patient's own statement that he was better at Suez was not warranted by his condition. I was intensely disappointed in this case, as it seemed a most promising one. I can only imagine, although there was no external or constitutional indications of more than one, it was a case of multiple abscess. It will be seen from his history that he suffered from dysentery immediately before his liver symptoms set in. Inflammation of the liver following dysentery mostly leads to multiple abscess.

CASE 3.—E. F. H——, aged forty-five. Service, twenty years; residence in India, seven years and two months; habits temperate. This patient, a conductor of the Ordnance department, was admitted under Dr. MacNally, the assistant physician, some time in February. The earlier part of the case seems to have been irregularly kept by the clerks, for no previous history or the man's physical state on admission is to be found in the notes furnished me from the hospital.—The first entry is February 2nd, 1880: Patient had a good night, pain over the hepatic region is much less, leg is healing, bowels moved once yesterday. My remembrance of the case, however, is very distinct. I was asked by Dr. MacNally to see the case with him in consultation, and found a weak, sickly man, with a distinct swelling in the hepatic region, and little or no fluctuation. As there was no indication for immediate interference, and the man was in a nervous, depressed state, it was determined to leave the abscess alone, at any rate for the present. Gradually it must have become more active, for on March 3rd, 1880, occurs this entry: Patient was put under chloroform yesterday in the semi-recumbent position, and the most prominent part marked by ink. An incision was made longitudinally about half an inch with a scalpel, after which a second sized trocar and cannula were introduced and the trocar removed; through the cannula flowed two ounces and a half of thick, lumpy, tenacious pus, tinged with blood; after the pus had ceased to flow a narrow strip of boracic lint was introduced through the cannula, which (cannula) was withdrawn. Over the wound boracic lint, four inches by three inches, was placed and Lister's antiseptic dressing put on. The carbolic spray was in play during the whole of the operation. The patient slept well and feels greatly relieved by the operation. Bowels not open since yesterday; appetite good, eats well.

The operation was performed by Dr. MacNally, as were all the subsequent dressings applied under his supervision. The man did well. I will omit the daily entrances, giving only one or two.—March 13th, 1880: Patient passed a very good night; had two motions since last visit; stools well formed. Patient is putting on flesh; takes all his food. Continue treatment; abscess redressed; discharge diminishing. The abscess, however, continued to discharge pretty freely until March 30th: Patient slept freely last night; tongue clean, appetite good; very little discharge now from the abscess. Continue treatment and diet.—April 13th: Patient discharged from hospital, much improved in health and strength. The abscess has closed up, but a slight

superficial wound still remains unhealed. He leaves by this evening's train *en route* to England *viâ* Bombay, having obtained two years' furlough. He telegraphed from Bombay to say that he had borne the journey well, and was to embark in a troopship.

Madras.

CASE OF ATTEMPTED PARACENTESIS PERICARDII.

By JOSEPH W. HUNT, M.D. LOND.,
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THE following case presents more than one point of interest, and shows the difficulty there sometimes is in diagnosing between a largely dilated heart and an adherent pericardium. Reported as shortly as possible, it is as follows:—

Henry W——, aged twenty-three, was sent into the hospital on Jan. 30th, 1880, under my care, by my friend Mr. Wells, towards the close of an attack of acute rheumatic fever. He had had a previous attack eleven years before, when his aortic valves had been affected. During the first week of his stay in the hospital his left pleura (which was filled with fluid) was twice aspirated for the relief of distressing palpitations, dyspnœa and orthopnœa, and an attack of acute pleurisy on the right side was cut short by the application of leeches. When admitted he had a loud aortic diastolic murmur and a largely dilated heart, while in addition pericardial friction was audible over the greater portion of the cardiac area, and there were signs of much pericardial effusion. On Feb. 7th, as there were manifest signs of cardiac failure, and he was apparently on the brink of the grave, I determined to aspirate the pericardium. At that time the physical signs were noted as follows. Only slight pulsation over cardiac area; apex-beat weak and diffused about two inches and a half below nipple; intercostal spaces over lower portion of cardiac area obliterated; upper level of cardiac dulness indicated by a line drawn from the top of the sternum to the left nipple; cardiac sounds very weak below, but above midsternum loud and accompanied by a marked systolic and diastolic bruit, not variable and not increased by pressure; only slight epigastric pulsation; jugulars not full; pulse very irregular, weak and compressible, varying from 60 to 70 or 80 per minute. Respiration 50 to 60 per minute. Marked orthopnœa. Thoroughly recognising the fact that the heart was much dilated, and remarking to the pupils present on the possibility of pericardial adhesions complicating the case, I introduced the finest needle into the pericardium through the fourth interspace near the sternum, and pushed it steadily on for more than an inch, its point being directed upwards. As no fluid came, and the violent pulsation of the needle showed that it had entered the heart walls, it was withdrawn, a little blood being found within the point. No bad symptom followed, and it was my intention to repeat the attempt another day, entering the pericardium an interspace or two higher up, but was prevented by the temporary improvement of the patient, and by a considerable fall in the amount of pericardial dulness. He died from cardiac failure on February 14th. The medical treatment adopted consisted, for the most part, in the frequent administration of digitalis, carbonate of ammonia, and stimulants. Occasionally other remedies were prescribed as required.

At the post-mortem examination the heart was found to be enormously enlarged; it reached from the right border of the sternum to the left nipple, and extended to the top of the sternum. Its right border was crossed by the right lung which was emphysematous, and extended over the middle line. The pericardium was adherent throughout. Over the lower portion the adhesions were strong, and evidently dated some time back, but over the upper portion they were slender, and did not closely bind down the pericardium to the heart, while in their meshes there was some amount of fluid, which was evidently undergoing absorption. On removal, the heart, filled with clot, weighed 31 oz.; when emptied of clot, 28 oz. The aortic valves were incompetent. The left ventricle was enormously dilated, and the muscular walls very much thicker than normal; from their paleness and softness they were evidently undergoing degenerative changes. The left auricle was also hypertrophied and dilated, but the right ventricle only to a slight extent. The mitral was thickened, and its chordæ tendineæ thickened and shortened, so that it probably failed to close completely the auriculo-ventricular orifice. The mark of the aspirator-needle could be distinctly seen in the adherent pericardium over the right ventricle, whence its course could be traced for over an inch through the wall of the right ventricle into the very much hypertrophied ventricular septum. It nowhere entered either ventricle. There was no trace of inflammation, or any other morbid changes along the track of the needle.

Remarks.—The diagnosis in this case was no doubt difficult. A large amount of cardiac dilatation and hypertrophy, depending on the old standing aortic disease, was evident, while the presence of pericardial adhesions to some extent was more than probable. On the other hand, the very large area of cardiac dulness, the obliteration of intercostal spaces, the amount of pericardial friction audible on admission, and which was afterwards lost, rendered the presence of a large amount of effusion probable; and no doubt a considerable amount of fluid, which was afterwards absorbed, would have been withdrawn if I had inserted the needle a little higher up, as I fully intended to do if a second aspiration was indicated. It must be remembered that it was impossible to trace any increase of pericardial dulness at the commencement of his stay in the hospital, owing to the left chest being completely filled with pleural effusion, and pleural and pericardial dulness thus running into each other. The physical signs noted above are what were evident after the pleura had been emptied by two aspirations. It is worth remarking the absence of any ill effects following the introduction of the needle for some considerable distance into the heart walls, and I believe that no harm would have followed even if the needle had entered the ventricle, provided it had been immediately withdrawn, before the contraction of the cardiac walls had helped the needle to tear up their substance. This case may be compared with another in which I attempted to aspirate the pericardium in a case of pericardial effusion complicating rheumatic fever. To my surprise only a few drops of fluid were obtained. The patient died of hyperpyrexia, and post-mortem it was found that the pericardium was widely distended with fluid, but that at the one spot where I aspirated there were adhesions between the heart and pericardium, among which the needle had got entangled and blocked. At all other parts the heart was free from adhesions.

Wolverhampton.

ON GENERAL PARALYSIS OF THE INSANE CONSECUTIVE TO LOCOMOTOR ATAXY.

By W. JULIUS MICKLE, M.D., M.R.C.P.,
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I HAVE elsewhere[1] briefly referred to the subject of general paralysis consecutive to locomotor ataxy.[2] The cases referred to are those in which the symptoms of true general paralysis of the insane follow on those of true locomotor ataxy, and in which the pathological lesions of general paralysis have been supposed to originate in an extension upwards from the lesions of progressive locomotor ataxia. These cases, and others of like pathological import, have been designated as examples of general paralysis by propagation. The cases just mentioned, as other than those beginning with locomotor ataxy, but of like pathological import, are cases in which some cranial nerve or nerves have first suffered disease, the extension of which to the brain has set up some pathological process ending in general paralysis.

Broadly speaking, in general paralysis the rule is that cerebral symptoms precede spinal. Spinal symptoms, indeed, may be absent or slight, and when present, as a rule, they are secondary both in time and in importance. The usual motor spinal symptoms are either ataxiform or

[1] General Paralysis of the Insane, 1880, pp. 82, 83, 141.
[2] The disease, "progressive locomotor ataxy," is referred to throughout this paper, not the mere symptom, the affection of gait.

paralytic; the ataxiform are those almost invariably found; the paralytic are accessory and inessential, but, especially in their slighter degrees, are very frequent accompaniments of the later stages of general paralysis. Usually the spinal symptoms are of a mixed character, being both ataxic and paretic in nature.

There are examples of general paralysis, however, in which the spinal symptoms come on simultaneously with the cerebral; there are also cases in which the spinal symptoms distinctly precede the latter. By this last group the observer is brought a step nearer to the subject now in question, for in cases belonging to it we may, in thought, follow a morbid process which originates in the spinal cord and meninges, and subsequently passes upward to the encephalon and its meninges. But in this group are found the ordinary symptoms and lesions, both spinal and cerebral, of general paralysis; here the ataxy differs from the ataxy of tabes dorsalis. Obviously, cases of this group differ from those in which general paralysis is supposed to follow upon a propagation to the brain of disease from the cord in prior locomotor ataxy. This alleged pathology of the cases has not been fully accepted, and in the case to be related the *causal* relationship of locomotor ataxy to general paralysis is defective in proof. Widely differing cases have been placed on record to exemplify the relationships and co-existence of locomotor ataxy and general paralysis. In some of these it is difficult to be certain, from the description, whether or not true general paralysis, or, again, true locomotor ataxy, was present; in some, either the former or the latter was certainly absent; and in some others, where both seem to have existed, their order of priority is by no means clear; while, again, in some the symptoms of general paralysis and of locomotor ataxy seem to have both appeared and continued simultaneously. Thus, the subject has been obscured by the introduction of cases that will not bear the special interpretation put upon them; and this has partly been due to the formerly imperfect recognition of the ataxiform character of the chief motor affection in general paralysis, the minds of observers having been prejudiced by the word paralysis, as applied to this disease, and by the undoubted paretic and paralytic conditions so often observed therein. Hence, patients in whom the ataxy of general paralysis has been unusually pronounced may readily, but erroneously, have been supposed subject to locomotor ataxy.

There is a slight want of clearness in Voisin's description of the pathogeny and relations of the spinal lesions in general paralysis. Yet it may be gathered that he regards the cases in which the spinal disorders antedate the encephalic as capable of being placed in three groups; in the first of which the spinal and encephalic lesions occur successively but without any relation between them of causality or continuity, similar causes producing first a myelitis and later on the cerebral lesions of general paresis; while in the second group the spinal affection is supposed to cause the encephalic lesion in a reflex manner, primarily affecting the cerebral circulation, the influence of the spinal cord upon vaso-motor phenomena being acknowledged; and, finally, in the third group there is a direct extension of disease to the brain from the pre-existing disease of the cord—the very sort of case we have been speaking of above.

In speaking of general paralysis by propagation—i.e., of general paralysis from extension to the brain of pre-existing disease from other parts of the nervous system—attention will here be confined to the cases in which the antecedent affection has been progressive locomotor ataxy, or grey degeneration of the posterior spinal columns.

I will refer briefly to some of the few cases, supposed of this kind, and already on record. Horn long ago described a case of locomotor ataxy, of nine years' standing, in which general paralysis of the ordinary type supervened. H. Hoffmann placed a doubtful similar instance on record. Baillarger described five cases stated to present the clinical features of both locomotor ataxy and general paralysis; but in one only of these does it seem that general paralysis may have succeeded to undoubted locomotor ataxy. Yet the history is most imperfect, and the sequence of events conjectural. In three others the grandiose mania, and other symptoms of general paralysis, supervened in the first period of locomotor ataxy—that, namely, in which affections of optic and ocular nerves and lightning pains appear, and which, as described by Duchenne more than twenty years ago, precedes the ataxy of the limbs in a typical case, the ataxy of locomotion only appearing in the second stage.

In these three cases it is by no means clear, therefore, that general paralysis may not have existed as early as, or earlier than, the locomotor ataxy, for general paralysis usually exists for some time before distinct exalted delusions are evinced, and therefore in these examples may easily have existed prior to the incipient locomotor ataxy. In the remaining case the mental symptoms and dysphasia of general paralysis distinctly preceded locomotor ataxy by a year. Then, again, in two of these cases it is said that the locomotor ataxy was arrested when general paralysis supervened, and in one, as also in another quoted, the general paralysis underwent recovery, while the locomotor ataxy grew worse. Clearly these cases are dissimilar from those in which there was actual coexistence of the two diseases. Especially is a transitory epiphenomenal appearance of general paralysis in the course of another affection an explanation one cannot accept, and the symptoms should receive some other name. Illustrations of a like kind occur in certain cases recorded by Mr. Plaxton and Dr. Nicol. Teissier's case is inconclusive. The cases mentioned by Topinard, of mental symptoms arising in locomotor ataxy, do not appear to have been instances of general paralysis. Westphal found locomotor ataxy sometimes followed in the later stages of its course by mental disease. The latter, in the character of the mental derangement, in the accompanying paralytic symptoms and emaciation, and in the intercurrent apoplectiform and epileptiform seizures, bore a certain similarity to general paralysis. If standing or walking the patients staggered and fell when the eyes were closed. Vesical failure and the motor disorder in the limbs long preceded the mental symptoms. In these cases of grey degeneration of the posterior columns of the cord, although mental symptoms supervened, it can scarcely be said that there was true general paralysis. The patients were free from impairment of articulation, and at the necropsies no cerebro-meningeal adhesion was found, the deviations from the healthy appearances being that there was some increase of ventricular fluid, and sometimes pia-matral œdema, or softening of the central parts of the cerebrum and paleness of its grey substance. Ph. Rey described three cases of supposed locomotor ataxy with consecutive general paralysis. Motet recorded a similar case, and Falret and Dally a doubtful one, as also Magnan. Foville placed four cases on record as being examples of true locomotor ataxy followed by true general paralysis, after periods varying from two months to six and a half years. One case came under notice too late for recognition of the particular affection of gait present, but it is said that the necropsy revealed sclerosis of the posterior columns of the cord, as well as the ordinary lesions of general paralysis. In another case the patient was demented. In a third exaltation supervened on the mental weakness, and in the fourth an outburst of expansive ambitious erotic mania beset the course of a gradual intellectual enfeeblement. Two of these had amaurosis and one amblyopia, the frequent accessories of locomotor ataxy, and especially in its first stage.

But there are cases in which general paralysis is preceded for some time by an amaurosis unconnected with locomotor ataxy. Three cases of amaurosis preceding general paralysis are vouched for by Mobèche, and examples of a like sequence have been recorded by Lélut, Lasègue, Parchappe, Calmeil, and others. Two such Foville adds to his four cases of locomotor ataxy, making six, and for a seventh takes a case in which was prior paralysis of the third cranial nerve. Falret and Billod also recorded a case of similar antecedent paralysis of the third cranial nerve, while Esquirol speaks of precursory strabismus, and Baillarger of the same with or without ptosis.

(To be concluded.)

CAMBRIDGE: DOWNING COLLEGE.—At the College Examination in Natural Science, to be held in June, 1881, in addition to the ordinary Foundation Scholarships, open exclusively to members of the College, one Foundation Scholarship of the annual value of £80 will be thrown open to all members of the University who have not kept more than six terms. The subjects of this examination will be, chemistry (theoretical and practical); physics (heat, electricity, and magnetism); comparative anatomy, physiology, and botany. The Examination for Minor Scholarships, which are open to all persons who have not entered at any College in the University, or who have not resided one entire term in any such College, will be held in Downing College, on Tuesday the 31st of May next and three following days.

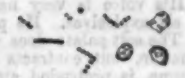
ON THE

CONTAGIUM OF IMPETIGO CONTAGIOSA.

BY H. RADCLIFFE CROCKER, M.D.

THOUGH not altogether unknown, this disease did not meet with general recognition and attention until after the publication of Dr. Tilbury Fox's article upon it in the *British Medical Journal* in 1864. Inquiry was naturally directed to the cause of its being contagious. In this country Mr. Hutchinson, in the Pathological Transactions, vol. vi., figures a fungus found in the crusts of two cases only out of many examined, and confesses that therefore the fungus is not an essential part of the disease. Kaposi and Geber have also found a fructifying fungus in the crusts. Geber, however, regards it as accidental. Piffard, in the *New York Medical Journal* for June, 1872, as quoted by Duhring, describes a vegetable organism of various shapes and sizes, mostly extremely minute, circular, oval, biscuit-shaped, and rod-like structures; no mycelium or spores. Occasionally he saw the same fungus as Kaposi. All these organisms were found in the crusts only, and are naturally open to the objections that, besides not being constantly found, they were present in the parts exposed to the air, and were therefore probably deposited from without. Dr. Tilbury Fox searched repeatedly in the fluid, but found no fungus.

So far, therefore, the fungus theory appears to have broken down; but the facts daily accumulating in favour of contagia being particulate led me to investigate the subject anew, and feeling that it was useless to examine the crusts, I selected cases in which the vesicles or pustules were still unruptured, thrust in a capillary tube, and then immediately sealed up the fluid withdrawn. The clear fluid was first examined with a power magnifying 550 diameters, and floating free in the fluid chains of micrococci were found;



Micrococci of impetigo contagiosa free in the fluid from a vesicle or pustule, and on the detached epithelial scales.

these were mostly in lines of four, but some longer chains were found and some pairs. The number was not very great, and on account of their minute size could be easily overlooked. In the pustular fluid the organisms were not certainly recognisable, owing to the large number of corpuscles and epithelium present with their débris. On staining the fluid with methanilin-violet the difficulty was removed, and micrococci in far larger numbers than in the clear fluid were to be seen; some were free in chains of two to eight or more, either in curved or straight lines; others were attached to the epithelium, but, so far as was observed, not to the pus-corpuscles. These latter stained much more readily than the small epithelial scales, and the micrococci stained deeply, and were therefore readily discerned in or on the epithelium. They were situated for the most part at the borders of the epithelium, though sometimes they were in the centre as well. Besides the chains some larger circular organisms were seen, but separate and comparatively few in number. No bacteria were observed. The micrococci could be seen with a power of 350 diameters, but of course a higher power was advantageous. Are these organisms the source of the contagion? It must be admitted that there is not absolute proof of it, and nothing but their successful cultivation, and inoculation with the cultivated fluid, would give a complete answer; but that their presence is not merely accidental is evidenced by their uniformity, so far as I have investigated, in unruptured vesicles and pustules, and in greater number in the pustules; while that they are intimately connected with the contagious property of the fluid, either as the contagium itself or as carriers, is rendered highly probable by the facts accumulating almost daily, connecting similar organisms with other contagia. Further investigation can alone decide this; but at present I merely wish to place the facts already ascertained upon record.

Welbeck-street, W.

ON THE USE OF THE SOLID RUBBER BANDAGE IN THE AFTER-TREATMENT OF SOME FORMS OF DISLOCATION AND ITS ATTENDANT RIGIDITY.

BY H. J. FORSTER, L.R.C.S.I.

PERHAPS in the whole category of complaints which the general practitioner has to treat there are none more productive of an annoyance to himself and anxiety to his patient than the partial anchylosis and œdema which are consequent more or less generally on all forms of dislocation. These disagreeable after-results might easily be avoided, or at all events reduced to a minimum, in suitable cases, if the medical attendant, after the proper manipulation of the joint and a few days' rest, were to apply a suitable elastic support and enjoin the patient to move about short of fatiguing the injured part. In the subjoined cases in illustration of the above remarks, no originality of treatment is claimed save in the material used, the advantages of which over the ordinary bandage I shall endeavour to prove.

In July last I was consulted by a patient who informed me that during the previously severe winter she had slipped and broken the small bone of her leg, as well as putting her ankle out. So the bone-setter under whose care she had been during the interval had told her. On examining the injured parts there were found considerable œdema and partial anchylosis. She also stated that her leg had been fomented and poulticed for some months, and as she had not regained her usual strength under this treatment, splints were applied from knee to ankle, and strict rest enjoined. On being requested by me to get up from the sofa on which she was lying and to move about, or even stand on her foot, she evidenced such symptoms of fear and dread of pain that I considered it useless to persist further. I consequently applied a rubber bandage as tightly as could be borne over the ankle and lower part of the leg, with the injunction it was to be removed at bedtime and reapplied in the morning. This treatment was persevered in for the next four days, when on again calling I found she could walk about fairly well, and that the œdema had almost entirely disappeared. After the expiration of a month, during which time she wore the bandage daily, she said she felt about as well as ever, and could walk any reasonable distance without help.

Another case, that of a man over whose ankle an empty cart had passed, after being under the care of an irregular practitioner for nearly three months, found himself at the end of that time with a more or less stiff joint. In his case, after the fibrous adhesions had been broken up in the manner so well described by Dr. W. Hood in the pages of THE LANCET, the bandage was applied and he was ordered to get about. In a short time the result was as good as could be desired.

Three cases of partial dislocation of the cartilage of the knee-joint, after being reduced, were treated in the same manner, and gave no further trouble, not even necessitating the usual preliminary few days' rest.

Four other cases of severe sprains, two of the wrist and two of the ankle, were also successfully treated in the same fashion.

The advantages which I have found to accrue from the use of the solid rubber bandage over the ordinary calico one are the continuous elastic resistance offered by it, and the consequent absorption both of fibrous, callous, and serous effusion, as well as a greater feeling of support, enabling the patient to move about with more confidence. In these points the calico bandage must be deficient for obvious reasons. Also, in the neighbourhood of the knee-joint, there is not merely greater adaptability in the bandage *per se* over even the ordinary elastic knee-cap, but by its greater density and elastic pressure it serves to keep *in situ* what a substance more or less wanting in these two properties can hardly be expected to fulfil. The one drawback experienced in the continuous use of the rubber bandage is the production of minute vesicles, which may become troublesome; however, this inconvenience may be avoided by punching several small holes in the material at suitable intervals.

Market Deeping.

A FEW NOTES ON A SUCCESSFUL CASE OF LARYNGO-TRACHEOTOMY IN ACUTE LARYNGITIS.

BY R. H. A. HUNTER, M.R.C.S.

ON the night of May 10th, 1879, I was asked to see E. P——, a stout, healthy-looking female child, aged nine years, said to be suffering from severe cold and sore-throat. On visiting the house I found the patient in bed, feverish, and complaining of slight pain in the region of the pomum Adami. There was difficulty of breathing, and a croupy cough. The throat and lungs were healthy. I ordered the air of the room to be kept warm and moist, and poppy-head fomentations to be applied to the throat. I prescribed a strong calomel and jalap powder, and a febrifuge mixture containing bromide of potassium, with light diet. On the following morning, finding the symptoms aggravated, I prescribed a second calomel and jalap powder, which, like the first, acted freely.

May 11th.—The cough, difficulty of breathing, and fever had increased. In the evening the patient became delirious. Respiration was greatly obstructed, lungs congested, cough smothered, and higher temperature. During the latter part of the day the child had suffered from frequent severe attacks of spasm of the glottis, requiring two attendants to prevent her jumping out of bed.

I now decided to perform laryngo-tracheotomy. With the assistance of a neighbouring practitioner, the child was placed on a table, and, chloroform being administered, the operation was completed in the usual way. On recovering from the chloroform, and being replaced in bed, the child breathed freely and easily.

13th.—The patient appeared much better. She had slept well, and the delirium had passed off. Ordered bromide of potassium mixture to be continued; diet, milk and beef-tea. During the day she continued to improve. The cough and respiration were easier, and the temperature lower; collection of mucus troublesome.

On the 14th and 15th the child continued to improve, and on the 16th she seemed so much better that I removed the tube, and allowed respiration to be carried on through the opening remaining in the windpipe. Ordered the wound to be frequently sponged with warm water containing a little Condy's fluid. Full diet.

On June 2nd the wound had completely closed; the child was out of bed, and able to eat, drink, and talk well.

Battersea-park-road, S.W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

CASES OF AMYOTROPHIC LATERAL SCLEROSIS.

(Under the care of Dr. FERRIER.)

UNDER the title "Sclérose latéral amyotrophique," Charcot has classified an assemblage of symptoms depending on symmetrical sclerosis of the lateral columns, and atrophy of certain motor nuclei of the medulla oblongata and anterior horns of the spinal cord. The symptoms usually commence in the upper extremities with paresis followed by rigidity, and ultimately by muscular atrophy more or less extensive. The lower extremities are also affected by paresis or paralysis and rigidity, but muscular atrophy is absent or slight. The last stage is the occurrence of bulbar paralysis.

The cases of this affection already on record are not so numerous as to render others at all superfluous, and more particularly as Charcot's nosography has been disputed by some. Leyden holds that there is nothing to warrant the differentiation of a separate class from those of the typical bulbar paralysis of Duchenne, with more or less extensive muscular atrophy elsewhere. In particular, he denies the fact of antecedent paresis or paralysis, and the occurrence of contracture or rigidity of the limbs. The following two cases confirm in all main points the association of symptoms described by Charcot. They do not, however, conform to the usual march of the disease. In both the bulbar symptoms were the first to attract attention, if not actually the first indications of the disease. The course of the symptoms is not, however, regarded by Charcot as an essential feature, and he refers to two cases in which also the disease commenced with bulbar symptoms.

CASE 1.—A. W——, aged thirty-eight, admitted on Oct. 15th, 1880. The patient had enjoyed good health, and never had specific disease. The present illness came on a year and a half ago. The morning after a long railway journey he found that his speech was affected so that he could not speak plainly. He also noticed some difficulty in swallowing liquids. He was treated at this time for relaxed throat. He thinks also that some mention was made of a polypus in the nose, owing doubtless to the nasal tone of his voice. Six months after the occurrence of the throat symptoms, about Nov. 1879, he observed that he had difficulty in turning a key in the lock, and about the same time that he had difficulty in walking. Dr. Robertson Lewis of Bristol, who had seen him in February, 1880, stated in a note that at that time there was very perceptible weakness in the arms. He had difficulty in writing, he could not raise his arms, and complained of pains in his shoulders. The legs were specially observed to be weak a month later. The arms and legs gradually became more weak and stiff. Decided wasting of the ball of the thumbs was observed in May.

Present state.—The patient is helpless, and unable to stand or walk, being obliged to lie in bed or sit propped up in a chair.—*Face:* The facial furrows are distinct, but not accentuated. He can purse up his lips somewhat, but cannot whistle or blow. He can inflate his cheeks if the nostrils are compressed, but cannot purse his lips sufficiently close to whistle. His voice is very nasal, there being a nasal souffle with all explosives. He pronounces "grub" as "ngrum," &c. The soft palate does not rise during inspiration or phonation, but contracts actively on being touched. The tongue is protruded straight, but is very tremulous and corrugated from muscular wasting. He keeps his head generally bent on the chest, but he can turn it to the right or left freely, though he cannot turn it back so far as normal. There is no marked rigidity in the muscles of the neck.

Upper extremities.—The upper arms are kept usually closely approximated to the chest, and the hands resting on the abdomen or thighs in the pronated position. He cannot raise the upper arms from the chest. Can only shrug the right shoulder a little; the left more readily. Can bring the left arm across the chest, and touch the right ear with the left hand, but cannot make a similar movement with the right. The movements are very slow and feeble, and accompanied with pain. Cannot cross the hands behind the back. Passive movements of the shoulder-joint indicate considerable resistance and rigidity, and cause great pain. The deltoids are much wasted. The trapezii are the seat of fibrillar tremors. The arms generally are emaciated, and fibrillar tremors are more or less general in the muscles. Can flex and extend the elbow joints. Can pronate and supinate the left hand, but cannot supinate the right. Can extend the left wrist feebly, and to the radial side only, but not the right. The muscles of the thenar and hypothenar eminences and the interossei are much wasted. Abduction and adduction of the fingers and apposition of the thumb impossible. The first metacarpal bone of the left hand is on a level with the second—the monkey thumb, and the basal phalanx of the forefinger hyper-extended. The wasted muscles are the seat of fibrillary tremors and subsultus. There is no reaction of degeneration to galvanic exploration, and the muscles react to the faradaic current, except the left thenar muscles.

Lower extremities.—There is no perceptible atrophy in any of the muscles of the lower extremities. There is marked rigidity and resistance to every movement, flexion, extension, and particularly to separation of the knees, which spring together forcibly when released, owing to the excessive contraction of the adductors. The feet bend to equino-varus

position, and the proximal phalanges of the toes are hyperextended. When the patient is supported he can scarcely move the limbs. Though he can feebly flex or extend the leg it is with effort, and he feels as if his feet were glued to the ground. The patellar tendon reflex is greatly exaggerated, and ankle clonus readily excited on both sides. The plantar cutaneous reflex is distinct on both sides. The cremasteric reflex is obtainable on both sides. The abdominal and epigastric reflexes are obtained with difficulty. Sensation, general and special, is unimpaired throughout; and the functions of the bladder and rectum in normal condition. The ophthalmoscopic appearances are entirely negative.

The condition of the patient did not alter appreciably during the whole period of his stay in the hospital. He was treated mainly with the constant current daily, and for a month before his departure with extract of Calabar bean in gradually increasing doses, from a quarter to one grain and a half three times a day. The rigidity of the lower extremities diminished somewhat under the physostigma treatment, but the patient said he felt more feeble. No real improvement was effected, nor indeed could it be looked for.

CASE 2.—R. M——, aged forty-four, a ship steward. Five years ago he fell overboard, and remained in the cold water for about a quarter of an hour, to which immersion he attributes his illness, which began some months afterwards with difficulty of speech. His voice had a nasal tone, and he had difficulty in swallowing. Three or four months after this he experienced weakness and tremulousness of the legs, which caused difficulty in maintaining his footing on deck, and going up or down stairs. He continued at his occupation on board ship for two years after the onset of the symptoms, but he was then obliged to relinquish it. He was admitted into St. Bartholomew's Hospital in April, 1878, and was under the care of Dr. Church for two months. Dr. Ormerod published some notes of his case in the St. Bartholomew's Hospital Reports, vol. xiv. At that time the patient had nasal speech, without evident paralysis of his soft palate, irritability and feebleness of his muscles, and tremulousness and weakness of his legs, particularly the right, which he dragged somewhat. In October, 1878, he was admitted into the Regent's-park Hospital for Epilepsy and Paralysis, and was treated by M. de Watteville. At this time the symptoms, according to the notes supplied me by M. de Watteville, were great weakness and rigidity of the legs, particularly the right, with exaggerated patellar reflexes. The arms were also weak, and the tendon reflexes exaggerated. Speech was markedly nasal, and there was considerable difficulty in swallowing solids. The soft palate rose only slightly during inspiration or phonation. There was also some diminution of sensibility of the right side at this time. (See *Brain*, vol. ii., pp. 179–180.) Under galvanic treatment of the upper and lower part of the spinal cord, and local treatment of the pharynx and larynx, there was a marked improvement, in the bulbar symptoms especially. But, after a fall in the month of November, the weakness of the limbs increased, though the bulbar symptoms remained in abeyance. After this period the patient came under my care both at Regent's-park Hospital and subsequently at King's College Hospital, and he has been under my observation at intervals up to his admission into the National Hospital for the Paralysed and Epileptic on Jan. 28th, 1881.

Present state.—Face: The muscles of expression act normally on both sides. The tongue is protruded straight, somewhat tremulous and wrinkled. The masseters, pterygoids, and buccinators act energetically. The soft palate rises only very slightly during a deep inspiration or on phonation, but contracts readily to touch. He cannot purse up his lips so as to whistle. Deglutition is good. Speech is very nasal, and all explosives have a nasal souffle. They are pronounced quite distinctly when the nostrils are compressed. There is no observable rigidity in the muscles of the neck.

Upper extremities.—All the movements of the arms are retained, but are feeble, and the muscles are soft and flabby. There is some difficulty in raising the arms well away from the sides, owing to stiffness about the shoulders, especially the pectoral muscles, and on the right side more particularly. The interossei and muscles of the thenar and hypothenar eminences are soft, considerably wasted, feeble and tremulous. Grasp of the right hand, 45 lb.; left 40 lb. All the muscles of the arms respond with abnormal readiness to percussion, and the wrist, olecranon, and acromial tap excite active contraction. The faradaic excitability of the muscles is retained, and within normal limits. That of the interossei and muscles of the ball of the thumbs is slightly diminished.

Lower extremities.—The patient walks with great difficulty. The legs tend to adduct, and the feet to assume the equino-varus position. The feet seem to stick to the ground, and progression requires hitching up the shoulder to allow the feet to be raised and advanced, rubbing on the ground. This is more marked in the right leg than the left. When lying in bed he can lift the heel, and flex and extend either knee with considerable force. Abduction of the legs is difficult, and also dorsal flexion of the feet. Occasionally severe spasms come on in the adductors and extensors of the leg, and the feet assume the equino-varus position with hyperextension of the basal phalanges. The contraction of the adductors is sometimes so great as to resist all attempts to separate the legs, and to require the interposition of a pillow between the knees to obviate the painful pressure. The patient complains of more or less constant pain in the region of the adductors, shooting upwards into the pelvis. He also complains of pains in the hips. The patellar reflex is excessive on both sides. The slightest tap excites almost tetanic extension of the leg. Ankle clonus is readily obtained on both sides. Clonus of the hamstrings is also readily produced when he assumes the position of sitting down in a chair. The plantar reflexes are absent, as also the abdominal and epigastric. Tactile sensibility is acute in the legs, and also generally. There is no appreciable difference between the two sides. The special senses are normal. The functions of the bladder are fairly normal, except that it must be emptied immediately on desire, otherwise there is difficulty in retention.

The patient was discharged on April 30th, considerably improved in general health, and with some diminution of the rigidity and pain in the lower extremities. Various methods of treatment, electrical and medicinal, were employed, but large doses of the combined iodide and bromide of potassium and rest in bed seemed to prove most beneficial.

Remarks.—The symptoms in both these cases agree in the essential features of the association of paresis, rigidity, and muscular atrophy, bulbar and spinal, with the cases of amyotrophic lateral sclerosis described by Charcot, and shown by him and by Gombault, Debove, &c., to be associated with sclerosis of the lateral columns, and atrophy of the motor cells of the bulb and spinal cord. The exact order in which these regions are implicated does not materially affect the general result. The assemblage of symptoms differs sufficiently from simple bulbar paralysis, or bulbar paralysis with more or less extensive muscular atrophy, in the well marked paresis and rigidity of the limbs preceding the atrophic wasting; and from ordinary secondary descending sclerosis, or primary lateral sclerosis, in the muscular atrophy, as to justify their being classed together as a distinct systematic group.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

THREE CASES OF POISONING BY THE ŒNANTHE CROCATA OR HEMLOCK WATER-DROPWORT, ONE FATAL.

WE are indebted to Dr. H. A. Bampton for the following notes of these cases.

The recorded cases of poisoning by the Œnanthe crocata are so few in number, that the following may be of professional interest, the more especially as in this part of the country poisoning by this indigenous member of the Umbelliferæ family is by no means rare amongst watering parties of foreign seamen. In 1869, at Falmouth, a party of twenty-seven sailors ate of the herb; four of them died. Last year the crew of an Italian barque partook of the same herb, mistaking it for wild celery; five of them died. A boat's crew of H.M.S. *Wellington*, while on shore at Campbeltown some years since, dug up a quantity and partook of some. Eight became very ill; two of them died.

On March 12th, about 2 P.M., three sailors from the Greek ship *Orpheus* landed at Jenny Cliff to collect water at a spring which rises hard by the shore. Having completed their work, two of them, George and Nicholls, dug up a plant which they mistook for the wild celery which grows in great abundance in watery districts in Greece, and is in great favour amongst the seafaring population as an article of diet. George ate about a root and a half, the

root being about the size of an average parsnip, which it resembles in appearance; Nicholls ate but an inch and a half of the root; and Andrews, a seaman from the Greek ship *Chios*, who was on a similar mission, the leaves and stalks of two or three plants. Andrews gave the following account of himself. He said the plant tasted as sweet as sugar. When he got on board, about three-quarters of an hour afterwards, his nose began to burn from eructations and constant spitting of thick stuff; his limbs felt weak and the muscles contracted, and he had tremors in the limbs and joints. He thought he had overworked himself, and he asked the captain for a shilling to go ashore to buy some rum, which he did, and soon felt all right after drinking it. He seems to have taken about a quarter of a pint of rum. He experienced no other symptoms nor discomfort. But Michael Nicholls, who ate more than one inch of the root, was not so fortunate. He states that the root tasted very sweet, but did not burn. He pulled off with others to the ship and emptied some casks, which occupied about three-quarters of an hour. He felt giddy and cold, had tremors in the limbs, could not see, but could hear. He was unconscious for half an hour, and on becoming conscious he had pain in the head, as if it were being cut off, and he had twisting, grinding pain in the stomach; thick phlegm collected at the back of the throat, and he was not sick till some melted butter was given him at about 4 P.M. He felt very weak and cold, with pain all over body, and could not walk without assistance. An emetic of sulphate of zinc was given to him by Mr. Fox, surgeon, about 6 P.M., after which he vomited, and was brought to the hospital a little after 7 P.M., nearly five hours after taking the poison. On admission, the patient was apparently conscious, though he stated afterwards he did not remember being carried to the hospital, though he remembered being put to bed by the nurses. From that time till noon the next day he did not remember anything further. His pupils were normal, the conjunctivæ highly injected. He moaned with constant expectoration, the pulse was fair, but the extremities were cold. Patient was placed in bed, and sinapisms were applied to the calves of the legs and thorax, and hot bottles to the feet, while hot brandy-and-water was administered internally; he would not take much, but crouched under the clothes and expectorated freely. Dr. Prance, one of the physicians to the hospital, saw him at this juncture.

On the following day he was drowsy and had a fair pulse. The urine contained abundant lithates. Patient complained of pain in the eyeballs, where there was increased tension; he said people in the ward looked very small till noon. The corneæ were dull and the conjunctivæ still injected. No pain anywhere else. As bowels were confined castor oil was ordered, which brought away a firm greenish-coloured stool.

On March 14th he expectorated viscid greenish-brown sputa. Roughened expiration; had a slight attack of epistaxis.

15th.—Rusty viscid sputa, with sibilant râles; felt quite well; no cough.

16th.—Discharged well.

George J——, whose case terminated fatally, ate a root and a half, and was able to perform the duties of rowing back to the ship, and unloading the boat, up to nearly an hour after having eaten the poison. He was walking across the deck when he suddenly fell down, as if shot, on the back of his head, inflicting a scalp wound. He cried out, "My God, I am done for!" vomited up some green stuff, and got green in the face, with eyeballs turned up. He foamed at the mouth with a thick mucus, which he was unable to bring up because he was apparently unconscious. He could not swallow. He was turned on his face by the crew, to endeavour to get rid of the mucus. The hands were clenched at times, and he had spasmodic contractions of the muscles of the legs and face. About five hours after the fatal meal he was carried to the hospital in a moribund condition. At the time of admission he was unconscious; the pupils were widely dilated; the pulse was perceptible, but slowed; respiration was impeded by a quantity of thick mucus, which filled his mouth and throat, and covered his beard. The extremities were cold. As respiration failed artificial respiration was tried, but with no avail; the patient died about ten minutes after admission. The muscular system was relaxed, with occasional spasmodic twitches.

Necropsy, forty-three hours after death.—Body well developed and muscular, age about thirty-five years. Post-mortem rigidity strongly marked; slight purple staining at back of neck and shoulders. The abdomen contained a small amount of gas. Diaphragm arched. The stomach was distended and of a bright pink colour, from injection of vessels. The transverse colon was contracted, and contained a small quantity of soft fæces; no trace of vegetable fibre could be detected even with a glass of high power. The stomach contained a quarter of a pint of grumous sour-smelling material, the colour of treacle. No trace of root could be found; there were several scattered inflammatory patches, and some brown discolourations where the mucous membrane was thin, at the greater curvature. Gall-bladder empty. On section of liver a large escape of dark-coloured blood. Spleen and kidneys normal. Bladder contracted, containing an ounce of urine. Descending colon and rectum distended, contained no fæces. The right ventricle of the heart contained a small quantity of fluid dark-coloured blood; the left a less quantity, thicker and darker. Muscular walls very relaxed and flaccid; muscular tissue soft and bloody. There were pleural adhesions. The lungs were congested and full of blood of a dark colour, and the bronchial tubes were full of mucus, as also trachea and mouth. No hæmorrhages from mouth, nose, or ears; no bruising of bone at seat of scalp wound. The dura mater was non-adherent at surface of the brain. The venous sinuses were distended, meningeal vessels injected, cerebral vessels strongly injected. Pia mater bled easily on section. There was a small effusion of lymph over surface of brain. The cerebellum was very soft, with small clots of dark blood between convolutions posteriorly. Small quantity of fluid in ventricles. The bright red vascularity of the surface of this brain contrasted strongly with the almost white brain from a subject who had died from scurvy, a necropsy of which was made on that day.

Remarks by Dr. BAMPTON.—The literature on this herb-poisoning is very scanty. Caspar gives an account, with an uncertain sound, of a supposed case. No symptoms were known. Post-mortem signs coincide with the above. Von Boeck gives some of the symptoms, but no post-mortem signs. Taylor mentions several cases, and gives the best account I have yet seen. The symptoms from the foregoing cases seem to be—muscular weakness, when small quantities are taken; complete paralysis in large; gastric irritation, visual disturbance, giddiness, excessive secretion of bronchial mucus—a marked symptom; more or less loss of consciousness, loss of temperature, enfeebled respiration. Cardiac action slowed; continued up to time that respiration ceased. Dilatation of the pupil in the fatal case, the third nerve participating in the general motor paralysis; loss of power in deglutition. The symptoms and post-mortem signs of poisoning from the Conium maculatum, Œnanthe crocata, Cicuta virosa, and Æthusa cynapium do not vary much. Motor paralysis is a prominent symptom. The post-mortem signs are: fluidity of the blood, hyperæmia of the brain, venous hyperæmia of the lungs, and the signs of death from asphyxia (Von Boeck). In the stomach extravasations and hyperæmic patches. The treatment indicated seems to be the early use of the stomach-pump, or of emetics; artificial respiration to be persevered with to the last; the administration of a strong infusion of tea to serve as a respiratory and general nerve stimulant; the tannin might also act as a chemical antidote by forming a precipitate; turpentine enemata and warmth. The explanation of the clinical experience, that conium is useful in allaying bronchial irritation, may be found in an analogous action to the Œnanthe crocata in promoting the secretion of mucus, thus covering the irritable surface and protecting it from cold winds in the upper portion of the respiratory tract. An anonymous correspondent in the *Standard* has taken upon himself to write that these cases of herb-poisoning must have been from the plant Sium angustifolium, and not the Œnanthe crocata, as stated. Now, the Sium angustifolium, or water-parsnip may be mistaken for watercress, but not for celery; whilst, on the other hand, the stem of the Œnanthe crocata may easily be mistaken for celery. The stem of a specimen procured by one of the sailors who recovered, from the same watering-place, was very like, as it had been bleached from being underground; the root is composed of a number of tubercles not unlike small parsnips, sweet to the taste. The most active part of the plant is the root—in its poisonous action especially—at this time of the year. It grows in great abundance in this neighbourhood. Browsing cattle are sometimes poisoned by it. It is unmistakably the Œnanthe crocata, and is well known to local botanists; and I doubt whether the anonymous correspondent of the

Standard could mistake it for the Sium angustifolium if he had ever seen it or compared the two. A Mr. Loverdo very opportunely suggests, in a letter to the *Standard* and other papers, that the captains of foreign ships should be warned of the various poisonous herbs that are indigenous to the localities about our seaports.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Intestinal Obstruction.—Tumour of Brain.—Calcareous Plates in Heart.—Pylephlebitis.—Ulcer of the Stomach.—Filaria Sanguinis Hominis.—Keloid of Pinna.—Pulmonary Aneurism.—Cerebral Aneurism.—Syphilitic Disease of Cerebral Vessels.—Encapsulation of an Ivory Peg in Bone.—Subastragaloid Dislocation of Foot.—Dislocation of Astragalus.—Genu Valgum.—Sarcoma of Femur.—Vesical Calculi.—Malformation of Heart.—Valvular Disease of Heart.—Cranio-tabes.

THE last ordinary meeting of the present session of the Pathological Society was held on Tuesday, May 17th, S. Wilks, M.D., in the chair. Two reports of the Morbid Growths Committee were presented, and although the list of agenda was a long one, the specimens were shown with such expedition that the meeting adjourned shortly before the usual hour.

Mr. BUTLIN read a report of the Morbid Growths Committee on Mr. Moulin's case of Cystic Disease of the Mamma, the conclusion arrived at being that it was an ill-developed carcinoma, the cysts being produced by plugging of the ducts with epithelium and secretion of fluid in the acini.

Dr. PAYNE read the report of Messrs. Beck and Godlee on Mr. Rushton Parker's case of Adeno-fibroma and Carcinoma affecting the same breast, by which Mr. Parker's description was fully confirmed.

Dr. TURNER showed a case of Intestinal Obstruction by a band. The patient, a child, under Dr. Sutton's care, was attacked with pain in the belly, followed next morning with intense pain and violent vomiting with free action of the bowels. When seen three days after the onset of the illness the belly was tympanitic and very distended; no great pain or tenderness. Mr. Rivington operated, and found several congested coils of intestine on the right side of a band which passed from the ileum to the umbilicus; the gut was reduced. The boy died in a few hours. Three bodies, like plum-stones, were found in the strangulated gut. The cord was found to contain a diverticulum of the ileum, and was situated about eighteen inches from the ileo-cæcal valve, the congested coils of intestine commenced just above the band.—Dr. WILKS asked if, at the time of operation, it was evident what the nature of the band was, and whether the surgeon was prepared to cut it through if necessary.—Dr. TURNER was not present, and did not know Mr. Rivington's views.

Dr. N. MOORE showed a Tumour involving the optic tracts, chiasma, and nerves within the skull. In nature it was a glioma. The whole of the rest of the encephalon was quite healthy. The man, aged thirty-four, died in St. Bartholomew's Hospital in January, 1881. He had been ill for ten months, with great thirst, loss of weight, and failing vision, with extreme white atrophy of the left optic disc, and to a less degree of the right. He passed from five to eleven pints of urine a day; no sugar or albumen ever found; sp. gr. 1004 to 1006. He became quite blind, and later on delirious, and then in a condition of stupor; no paralysis. Lancereaux records cases of diabetes insipidus from injury to the anterior part of the skull; this case was of interest in connexion with those cases.—Dr. S. WILKS asked if Dr. N. Moore had formed a theory as to the mode of production of the diabetes.—Dr. BAXTER asked what the condition of the right optic disc was during life, whether there was evidence of neuritis, or whether the atrophy was a primary change.—Dr. N. MOORE said he had quoted Mr. Vernon's opinion, the right disc was at first pale and later distinctly atrophied.—Dr. ORMEROD asked if the quantity of urine at all corresponded to the growth of the tumour.—Dr. N. MOORE replied in the negative.

Dr. BURNET exhibited a Heart with Calcareous Plates, obtained from a woman aged thirty-four. She suffered from ascites and anasarca. Rough rasping was felt over and with apex beat of heart; there was a strange click before running into systolic sound; later on the heart's action was very irregular, and a systolic bruit was observed. At the autopsy, in addition to other changes, four calcareous plates were found: two on the exterior of the ventricles and two on the inside, close to the auricles.—Dr. N. MOORE asked if either of the plates was pericardial, and whether one was connected with the auriculo-ventricular fibro-cartilaginous ring. They were not bony, and not associated with disease of endocardium, and possibly they had a different origin on the two surfaces of the ventricle.—Dr. BURNET thought they were neither pericardial nor connected with the auriculo-ventricular ring.

Dr. GOODHART showed a Microscopical specimen of Local Cirrhosis due to Pylephlebitis. A boy had abscesses and empyema, and lardaceous visceral disease. The portal vein was found completely obliterated with old adherent clot, with purulent matter in its centre. In various parts of the liver there were fibrous puckered scars with a yellow centre. Some of the smaller portal veins contained pus, and one cold abscess was found in the liver. His view was that the pylephlebitis had partly ended in suppuration, and partly in cirrhosis.—Dr. WILKS said the change was analogous to that found in surgical kidney.

Dr. GOODHART also exhibited a case of Ulcer of the Stomach in an infant at birth. The child vomited blood and died; a small perforating ulcer, with a small vessel at the bottom, was found at the extreme cardiac end of the stomach, at the greater curvature. It was in all its characters a miniature of the perforating ulcers of adults. There is only one, doubtful, similar case on record, mentioned by Dr. Wilson Fox.

Dr. THIN showed (for Dr. Manson of Amoy) a small Lymph-scrotum, with part of the female parent filaria sanguinis hominis still *in situ* lying in a dilated lymphatic, the male being, probably, Dr. Manson believed, in some part of the growth. He also showed an Elephantiasis Tumour of the Scrotum, in which the condition had supervened on that of lymph-scrotum. With these he exhibited also for Dr. Manson two Keloid Growths excised from the lobules of the ears of the same woman, growing from the earring punctures, the symmetrical character of the growths producing a peculiar effect, as was well seen from a photograph of the patient which had been sent with the specimens. Dr. Thin had examined part of one of the tumours minutely and had found the usual keloid tissue.—Dr. S. WILKS asked if this was the filaria sanguinis, and whether it was found in the blood.—Dr. THIN said "Yes," and that the filaria in the younger stage was in the blood of one person in ten in Amoy, but much more frequently found at night than during the day.

Dr. S. WEST showed two cases of Pulmonary Aneurism. In both cases the opposite lung was nearly healthy, and in one the disease very localised. In both there was a short history, while the disease must have been of long standing; in one a large laminated clot was found filling up a pulmonary cavity, in the other the lung was almost entirely excavated.—Dr. S. WILKS said that many cases of fatal hæmorrhage from pulmonary aneurism had now been recorded, and he thought all cases of fatal hæmoptysis were due not to destruction of the lung, but to secondary vascular change; and in such cases the disease was chronic and localised, with hardly any hint of phthisis.—Dr. S. WEST said he had always been able to find the cause of fatal pulmonary hæmorrhage.—Dr. S. WEST also showed an aneurism from a woman who had occasional sickness and headache, and who suddenly became unconscious, and died in four hours. Post-mortem, blood was seen covering the base of the brain and reaching into the fourth ventricle, and a small aneurism on the posterior communicating artery was found with an extensive rupture. No other disease. A boy, aged twelve, with adherent pericardium and mitral disease, was seized with sickness, headache, and coma, and died in a few hours. Suffusion of blood over the whole base of the brain was found, and a ruptured aneurism on the middle cerebral artery was discovered, the rupture being into the descending cornu of the lateral ventricle; the blood had reached the surface through the transverse fissure; the artery was very brittle; no evidence of embolism.

Mr. W. ANDERSON exhibited drawings of Syphilitic

Disease of the Cerebral Vessels. The special symptoms in the case were acute tetanus, hyperpyrexia, and coma just before death, and he thought this was an unprecedented occurrence in these cases. The changes found were those described by Heubner, and affected chiefly the intima.—Mr. W. ANDERSON also showed a specimen of Encapsulation of an Ivory Peg after Dieffenbach's operation for false joint. The peg had been retained for nearly four months; it was quite unchanged, apparently owing to its encapsulation.

Mr. H. MORRIS showed three cases—1. Subastragaloid Dislocation outwards of the Foot. Five years ago the man suffered a severe fall, one leg was amputated at the time. The other, much injured, was saved, but has been a constant source of annoyance to him, and he begged for its amputation, and thus the specimen was obtained. Its chief interest lay in the great laceration of all the tendons passing round the ankle. 2. Dislocation of the Astragalus. A woman, aged sixty, met with a fall sixteen years ago. The sole of the foot was turned in, the deformity being exactly like talipes equino varus. The astragalus is dislocated from the os calcis and scaphoid, and is rotated on itself, so that its upper and inner border is under the tibia. 3. Genu Valgum, a dissected specimen, showing an enormous hypertrophy of the inner condyle, and a large supplemental mass of cartilage on outer condyle, with very misshapen patella. Eight years before, the boy, now aged seventeen, met with a severe accident, in which, however, the knee was not injured. After it a lump formed over the lower part of the tibia, and was opened and sinuses developed, which have never healed; the knee swelled and grew big on its inner side. Six years ago he injured his elbow, and there also is a large growth. The fibula could not be traced all down the leg; the leg was amputated, and a fracture of the tibia was then found with a false joint, and the fibula is there in contact with the tibia and helping to support the weight of the body.

Mr. EVE showed a recent specimen of Sarcoma of the Femur. A young woman, aged twenty-five, four months ago had a blow on the right knee, followed by swelling. On admission to St. Bartholomew's the joint was swollen, and the skin red. The limb was amputated, and it was then found that the external condyle of the femur was destroyed by a malignant growth, which had also burst into the joint and infiltrated the synovial membrane. It was interesting as following on an injury and as simulating disease of the knee in its earlier stages. The tumour is a small spindle-celled sarcoma.

Dr. F. TAYLOR showed two Calculi (for Dr. Curran)—one of them of peculiar shape, which was situated partly in the urethra, and had to be pulled back into the bladder before it could be removed. The other, two inches long, was passed spontaneously by a woman in India.

Dr. TIRARD showed a case of Malformation of the Heart from a child five months old. There was no cyanosis during life. Post mortem the following changes were found:—two aortic cusps, four pulmonary cusps, a patent foramen ovale, aperture through the septum ventriculorum, and disease of both mitral and tricuspid valves.

Dr. CARRINGTON showed a specimen of Mitral Tricuspid and Aortic Disease; the Tricuspid disease was the most recent. The walls of the heart showed marked fatty degeneration.

Mr. CHURCHILL showed a specimen of Cranio-tabes from a child aged four, that died from congestion of the lungs. There was general rickety condition of the ribs, wrist, and tibiæ.

In a few closing remarks Dr. S. WILKS said that of all the interesting specimens shown during his presidency, those that struck him the most were the specimens of new growths; their whole structure was shown, their origin traced, and their relation to the normal growths explained. In this way there was hope that knowledge of the true mode of treatment, preventive and curative, might be attained; in his earlier years it was thought to be enough to examine into the histology only of such growths. Although the Society now suspended its meetings, its members he knew would continue their labours with unabated energy.

The following card specimens were exhibited:—Gummata of Brain, Cranial Bones and Spinal Cord, by Mr. F. Jordon; Osteo-sarcoma of Lower End of Femur, Cancer of Mamma following Eczema of Nipple, Drawing of a case of Cheiropompholyx, Sequestrum of Clavicle, by Dr. MacNaughton Jones; Ainhum, by Dr. Crombie.

The Society then adjourned.

CLINICAL SOCIETY OF LONDON.

Report of the Committee on Excision of the Hip-joint in Childhood.—Aortic Aneurism.—Anorexia Nervosa.—Antiseptic Osteotomy of the Tibia.

THE ordinary meeting of the Clinical Society of London was held on Friday, May 13th, Joseph Lister, Esq., F.R.S., in the chair.

Mr. HOWARD MARSH presented the Report of the Committee appointed to inquire into the value of Excision as a means of treating disease of the Hip-joint in Childhood, of which the following is an abstract. The points specially investigated were:—1. The indications for the operation; 2, its results; 3, the method of operating; and 4, the nature of the disease. In 45 cases treated by excision there was a total mortality of 35·5 per cent. from causes connected with the disease; 13·4 per cent. from some form of tubercular disease; the average duration of treatment was 1¾ years; the average shortening amounted to 2⅜ in., while the movement at the hip was free, limited, or *nil* in the proportion of 11, 6, and 3. In 260 cases of suppuration treated without excision, there was a mortality of 30·4 per cent. counted as above, 9·2 per cent. from tubercular disease, an average period of treatment of 2½ years, with an average shortening in 33 cases of 1·6 in., and in 35 of the cases 30 walked with slight or no limp, 5 with considerable limp; the movement was free, limited, or *nil* in the proportion of 5, 4½, and 3. In 124 cases without suppuration the total mortality was 10·5 per cent., 7 per cent. from tubercular disease, and the movement was free, limited, or *nil* in the proportion of 5, 3, 3; in 17 of these cases the average shortening was 1·4 in., and in 1 there was apparent lengthening of ⅝ in.; of 22 of them 19 walked well, and 3 limped. Sequestra were found in 59 per cent. of the specimens of the disease examined. Of a total of 203 cases of excision collected from various sources 13·7 per cent. died directly from the operation. The pathological indications for the operation are stated to be necrosis of head of femur, or formation of large sequestra, extensive caries of the bones, intrapelvic abscess from acetabular disease, and long-continued suppuration. The clinical indications are—rapid onset of suppuration, with severe local and constitutional symptoms, general albuminoid disease and long-continued suppuration in spite of other treatment. Pelvic disease is no bar to the operation. The mortality from tubercular meningitis, in cases of excision, was 4·4 per cent., in other cases of suppuration 6·1 per cent., in cases without suppuration 5·6 per cent. Of 429 cases 9 per cent. died from some form of tubercular disease. The limb is more generally less useful after excision than other modes of careful treatment. Only the diseased bone should be removed, and the great trochanter only when diseased or when there is extensive disease of the pelvis. While the occurrence of necrosis is shown to be proportionately very large, clinical records show that, in many instances, these sequestra are small, and either come away by themselves or are very easily removed in general operations.

Dr. WHIPHAM read a paper on a Case of Aortic Aneurism encroaching on the Trachea at its bifurcation, demonstrated during life by the Laryngoscope. A carpet cutter, aged forty-nine, was admitted into St. George's Hospital, under Dr. Wadham, on March 7th, 1881, almost speechless, and suffering severely from dyspnœa. The man had never had any serious illness, and had not suffered from syphilis. There was no history of asthma, and his occupation did not involve any severe strain. He had never before experienced an attack like the one for which he was admitted. He had for some weeks suffered considerable pain under the right scapula, for which he had been treated for dyspepsia. On the morning of March 7th, when he was going to his work, he was suddenly seized with a most severe attack of dyspnœa, which rendered him speechless and almost unconscious. He was brought at once to the hospital, and on his admission at 8 A.M. was in a state of extreme dyspnœa, ashy pale, unable to speak, and heedless of anything said or done. His hands were cold and his breathing stridulous. Leeches were applied to the throat, and he was ordered a mixture of ether and chloroform. By 10.30 A.M. his respiration had become perfectly natural, and his voice, though weak, was natural in tone. The heart was not obviously out of position; a systolic bruit was heard over the base, and to the right of the sternum. No

abdominal pulsation or thrill was detected. The pulses in the radial arteries were equal and rather hard, 126. Wheezing, stridulous sounds were audible throughout the chest. At 2 P.M., at Dr. Wadham's request, Dr. Whipham made a laryngoscopic examination. The vocal cords were faintly pink, but there was no swelling of the larynx, and all movements of the cords were perfect. The first two or three rings of the trachea were visible, and normal in appearance; but below them, about three inches below the cords, the posterior wall of the trachea was bulged. The mucous membrane covering this swelling was much congested. At 4 P.M. there was a sudden recurrence of dyspnœa, and, without the least aggravation of the patient's distress, a second laryngoscopic examination was made. The bulging of the trachea was visible, as before, and the movements of the larynx were perfect; in fact, the extent of abduction of the cords was unusually great. The various remedial measures proved unavailing, and the patient was suffocated at 8 P.M. At the post-mortem examination an aneurism was found, involving the descending portion of the aortic arch and the commencement of the thoracic aorta; from the right of the upper part of the sac a secondary aneurism with thin soft walls arose, and this second sac had flattened and produced a certain amount of atrophy of the œsophagus, that caused the bulging seen just above the bifurcation of the trachea. The diagnosis during life was that a tumour (in all probability an aneurism) was the cause both of the appearances and symptoms, and the case was adduced as being a rare instance of actual demonstration of an aneurism pressing on the trachea at its bifurcation. The sudden access of the symptoms was possibly explained by rapid dilatation of the thin walls of the secondary aneurism.—Dr. C. WILLIAMS asked whether there were not any physical signs of the aneurism along the spine; in the cases he had seen there was generally some bruit, and usually a tubular sound over one scapula. An aneurism presenting and pushing forwards in such a way was very rare.—Dr. SEMON thought Dr. Whipham very fortunate in his case, for too often the physician cannot determine the seat of the obstruction. He had seen a case with Dr. Ord in which there was bilateral incomplete paralysis of the abductors of the larynx, but there was no local sign of aneurism, and the difficulty was to decide if any other source of obstruction existed lower down. Tracheotomy was performed, and the patient died ten days later from rupture of the aneurism which pressed on the trachea and both bronchi. He thought he had found that the inferior laryngeal nerve was differentiated, and that each laryngeal muscle had its own ganglionic centre, and that there was a tendency on the part of the nerves supplying the abductors to become diseased more quickly than the other branches of this nerve; much clinical and pathological evidence of this had been met with by him. Thus, paralysis of an abductor muscle was far more common in ascending or descending degeneration, and from pressure of the nerve-trunk on any part of its course, while functional disease, such as hysteria, has a similar proclivity to affect the part of the nerve supplying the adductor muscle. Professor Elsberg of America has observed that during convalescence after complete paralysis of the inferior laryngeal nerve, the adductor muscles are the first to show signs of recovery, and this fact may cause serious symptoms during true convalescence.—Mr. GOLDING BIRD had recently met with a similar case in Guy's Hospital, in which a pulsating tumour existed at the root of the neck, which on coughing was pushed up and ceased to pulsate. Dr. Wilks diagnosed an aneurism. He was re-admitted under Dr. Fagge. Mr. Lane, the house-physician, observed during an attack of dyspnœa a bulging inwards of one side of the trachea. The right pulse was smaller than the left. The larynx was very easily examined, the abductors were acting to the full, the right side of the trachea was seen more plainly than the left. He cut down upon the tumour and found it was aneurismal, and then ligatured the common carotid artery. After death a perfect innominate aneurism (not affecting either of its divisions) was found, bulging inwards the trachea; there were other aneurisms in various parts of the body.—Dr. ORD had twice seen the vocal cord adducted in cases of aneurisms pressing upon the left recurrent laryngeal nerve. At present he had a case with hoarseness and permanent adduction of one cord, and other symptoms pointed to an aneurism of the arch of the aorta. The laryngoscope was useful not only for diagnosis, but also for practice to decide upon the probable value of tracheotomy.—Dr. LONGHURST had often observed extremely sudden attacks of dyspnœa in cases of aortic aneurism, and he asked how it was that an aneurism could exist in such a situation for years without any symptoms. Did Dr. Whipham observe the state of the pupils? What was the actual cause of death?—Dr. WHIPHAM replied that an accurate examination of the patient's chest was impossible owing to his condition. The laryngoscope had saved the man from tracheotomy. There was no difference in the tracheal swelling during the attack of dyspnœa. The pupils were not noticed. The patient died of suffocation.

Dr. DOWSE read notes of a Case of Anorexia Nervosa. A. J——, aged fourteen, was admitted into the Hospital for Epilepsy and Paralysis on July 5th, 1880, with the following history:—Family history good. Her parents are healthy and strong, and so are her brothers and sisters. She was always considered to be a delicate child, and during her infancy cod-liver oil was given her on account of her weakness. In the early part of last summer she began notably to decline, stating that she could not swallow food, and exhibited great obstinacy of disposition. She would cry at the slightest opposition to her wishes, and often without any apparent reason. Being a delicate child she had always been treated with more indulgence than the rest of the children, and in her sullen fits at this time she would never speak to her mother, except in tones of the greatest violence. She grew from bad to worse, and in February last year she went thirteen days without taking anything besides a little water, at least not to anybody's knowledge. She became so weak that her parents sat up with her for nearly a week, and one night she was thought to be dying. It is supposed she had a fit on one occasion, and it was thought she was dead. She would never begin a conversation or join in one, and it would sometimes be difficult to get a reply from her. Her aversion to food of any kind was most marked. On admission to the hospital she was unable to stand without help. Her eyes downcast, cheek-bones prominent from wasting, angles of mouth depressed; she looked the picture of misery. Voice scarcely audible; she was taciturn, shy, and reserved. There was a general morbid state of functional inactivity; all her movements were slow, and her mind was equally inactive. The breath was offensive, the tongue fairly clean, the bowels obstinately confined, and the evacuations were pale and clay-coloured. The temperature was never over 98° F., and frequently below it. The extremities were cold and of a bluish colour. The special senses were normal. Pupils sluggish. Pulse 120, respiration 20. There was no marked anæsthesia of the fauces, no globus, or other hysterical symptoms. Upon her admission considerable difficulty was experienced in getting her to take food, but forcible feeding was never had recourse to. She was in the hospital for two months, and her condition upon admission and departure was very striking and characteristic. She had gained considerably in weight, and instead of being taciturn and reserved she was cheerful and agreeable to all about her, and took food without any reserve or hesitation. The cure was brought about by the frequent administration of fluid nourishment. It was made compulsory for her to take in twenty-four hours three eggs, one pint of beef-tea, three pints of milk, and three ounces of brandy. No medicine was given, except half a drop of croton oil occasionally.—Dr. C. WILLIAMS had seen several examples of this disease, which had been brought to him as cases of phthisis. They are very cold and clammy to the touch, with a slow pulse; they are never febrile, and there are no physical signs of phthisis. The diagnosis is easy, but the management of them is very difficult. Mental treatment is very useful, but forcible feeding is often needful, and the nutritive enemata are the best means of applying force.

Mr. PEARCE GOULD read a paper on a Case of Antiseptic Osteotomy of the Tibia, in which rapidly fatal carbolic intoxication occurred. A lad, eight years of age, of robust appearance, was admitted, under his care, into Westminster Hospital in Oct. 1880, with rickety deformity of the legs, especially of the left tibia. Other treatment had been perseveringly tried at the National Orthopædic Hospital for some time without avail, and he was sent in for the purpose of having osteotomy performed. His general health was very good. On Oct. 30th chloroform was administered, and the left tibia divided with McEwen's chisel, with a careful observance of the details of Listerism. He quickly recovered from the effects of the chloroform, and slept well through the night; next morning (Oct. 31st) he took his breakfast

and appeared quite well; temperature 98·4°. At 11 A.M. (twenty-one hours after the operation) he vomited; and vomited a watery fluid repeatedly up till 9.30 P.M. He also passed two orange-coloured loose stools. At 7 P.M. he was rigid, and at 8 P.M. very restless; at 9 P.M. he was almost unconscious, he was breathing hurriedly, pulse almost imperceptible at the wrist. At 10 P.M. Mr. Gould saw him; he was then conscious; lying quiet and quite flat, respiration 44 per minute, air entered lungs freely, pulse very small and rapid, pupils small. He died, asphyxiated, at 2.30 A.M., Nov. 1st, thirty-six hours and three-quarters after the operation. There was complete suppression of urine after 11 A.M. Temperature rose to 100·2°, and fell to 99·6° at 2 A.M. on Nov. 1st. The treatment consisted in the application of warmth and stimulants to the surface, and brandy internally. At the autopsy all the viscera were apparently healthy, with the exception of congestion of the tracheal and bronchial mucous membrane, and excess of mucus in these tubes, and slight congestion of the lungs. The left side of the heart was empty, the right side contained partly-clotted blood; blood in smaller veins all fluid, in the larger partly in soft clots, all of it black. No petechiæ; no staining of endocardium or intima; no sign of fat embolism. Bladder empty. A small blood-clot in the wound; no crushing of the medulla; no thrombosis of tibial vessels. Microscopic preparations of the organs were made for Mr. Gould by Dr. Heneage Gibbes, some of which were shown at the meeting. From these it was seen that there was thrombosis of the capillaries and smaller vessels of the lungs with minute spots of round-cell inflammatory exudation. Similar minute inflammatory foci were also found in the kidneys, while sections of the stomach showed intense inflammation of its mucous surface, only traces of its glands being visible, and at places the process was evidently advancing to suppuration. No sign of fat embolism. In discussing the cause of death Mr. Gould pointed out that shock, chloroform, the acute specifics, erysipelas, septicæmia, pyæmia, and fat embolism, might be excluded, as was also the ingestion of any irritant matter, but yet both the symptoms and pathological changes showed evidence of the circulation of some irritant in the blood. The symptoms were individually considered, and it was shown that the vomiting, diarrhœa with orange stools, collapse, rigidity, restlessness, loss of consciousness, very hurried respiration, slight rise of temperature, and death from asphyxia, were the symptoms observed in cases of undoubted carbolic intoxication. The urine passed before the onset of vomiting appeared to be normal, and was not preserved; the suppression of urine later on was a new fact in such cases. The softly coagulated and black blood had been noted before, but there was no record of any microscopical examination of the apparently healthy organs usually found. The quantity of acid absorbed was no doubt small, and the great susceptibility of the patient to its toxic effects must at present be spoken of as an idiosyncrasy; but from the absence of other cause, and of any facts to negative the supposition, as well as the agreement of the symptoms and post-mortem pathological changes in the main with those observed in cases of carbolic intoxication, he was forced to the conclusion that such poisoning was the cause of death.—Professor LISTER remarked upon the interest attaching to the suppression of urine, which he had not met with before. He had no doubt that Mr. Gould's view must be accepted, that this patient was one of those who had an unfortunate susceptibility to the toxic effects of carbolic acid. He had met with cases of such susceptibility, and one he called to mind was a lady whose breast he removed and dressed in his usual manner; intense symptoms of carbolic poisoning came on, and boracic lint was substituted for the gauze, dressing, but the spray was used when the lint was changed and this was sufficient to keep up the symptoms, which only abated when its use was discontinued. As an instance of the special local susceptibility of some patients, he mentioned a case of chronic synovitis of the knee-joint, which he opened and dressed antiseptically, and next day he found all the skin under the gauze intensely red and irritated. It had been stated that there was no antiseptic that could with safety replace carbolic acid, though several had been tried; but he was in a position to say that the oil of Eucalyptus globulus, if used properly, is a powerful and perfectly reliable antiseptic, and is also quite unirritating and without toxic effects. If the oil be made into an emulsion with spirit and water, and then used, it very quickly evoporates; but he had found that gum dammar holds it exceedingly well, and the mixture remains soft and strongly odorous of the oil even at the end of several weeks. He had used a gauze prepared with a mixture of one part of the oil, three of dammar, and three of paraffine, and he was able to assert that it might be thoroughly trusted as an antiseptic where carbolic acid was inadvisable.

The meeting then adjourned.

MEDICAL SOCIETY OF LONDON.

Villous Polypus of Rectum.—Muscular Atrophy.

AT the meeting on April 25th Dr. Broadbent, President, in the chair, Mr. GOODSALL exhibited an adult male, who was under his care at St. Mark's Hospital, suffering from a large villous polypus of the rectum. The mass was about the size of an orange, and was rough and tuberculated on the surface. There was a frequent and copious watery discharge from the rectum, but the man had never lost more than half an ounce of blood at any one time, nor was he losing flesh in any marked degree. Mr. Goodsall had seen several such cases. In this instance the disease had been treated elsewhere as one of simple diarrhœa, no exploration of the bowel having been made. The pedicle of the tumour was well within the reach of the finger, and now of sufficient length to allow of the painless extrusion of the mass.—Dr. DE HAVILLAND HALL asked if in the other cases referred to there had been any recurrence of the growth after operation.—Mr. EDMUND OWEN remarked upon the necessity in any case of irritation of the rectum of making a thorough exploration of the bowel by the finger; in this manner only could a small villous growth or vascular polypus be detected.—Dr. COUPLAND questioned the applicability of the term "villous" to the lobulated mass which formed this polypus.—The PRESIDENT asked concerning the nature of the discharge of the pale and odourless fluid, and also what line of treatment would be followed.—Mr. GOODSALL, in reply, remarked upon the comparative rarity of the disease, and upon the peculiar watery discharge. He knew of no instance of recurrence after removal, and intended treating this by transfixing the base and securing the parts of the pedicle in three fine ligatures.

Dr. ALLEN STURGE read a paper on Muscular Atrophy, and exhibited two patients suffering from progressive muscular atrophy to illustrate his remarks. He began by giving a brief account of the condition leading to muscular atrophy, whether acute or chronic, stating that in either case the condition might be due to disease of the anterior horns of grey matter in the spinal cord, to disease of the anterior roots of the nerves, of the trunks of the nerves, or to disease of the muscle structures themselves. He called special attention to the fact that atrophy tends to affect groups of muscles in a limb rather than the limb as a whole, thus differing from other forms of paralysis. Muscles may be grouped in two ways: (1) anatomically—i.e., according to their position in a limb, or according to their nerve-supply; (2) physiologically, according to their association in function. When atrophy results from disease of the anterior horns, the muscles are affected according to their physiological grouping; when it is due to disease or section of a nerve, they are affected according to their anatomical grouping. This tends to prove that the centres in the spinal cord for the various muscles are arranged so that the centres for a set of muscles habitually employed together shall be contiguous to one another, and together form a large centre for the coördination of these muscles to produce some of the more automatic actions. Dr. Sturge then passed on to compare the acute with the chronic forms of muscular atrophy, stating that in the acute disease there is no tendency to symmetry, which, on the contrary, is often present in the chronic form of muscular atrophy; that in the latter there is not unfrequently seen a tendency to simultaneous affection of homologous groups of muscles in the upper and lower limb; that in the acute all parts of a muscle are affected in about the same degree, whereas in the chronic disease some bundles of muscular fibre are entirely destroyed, whilst others may be little, if at all, affected. This points to the presence, in the acute affection, of a gross lesion attacking a whole spinal centre at once. In the chronic affection individual nerve cells are attacked and destroyed, whilst others in their immediate neighbourhood are left

untouched. In other words, the acute affection attacks the centre *en masse*; the chronic attacks it in detail.—The PRESIDENT remarked on the great value of Dr. Sturge's paper, and on the excellent way in which he had worked up the clinical and pathological details in one continuous account.—Dr. SYMES THOMPSON remarked on the question of chronic muscular atrophy depending upon central or peripheral change. He would like to hear more upon the electro-therapeutics adopted in these cases. Many years ago he read a paper on the subject before that Society; much progress had since been made in the knowledge of this and allied affections.—The PRESIDENT expressed his individual thanks to the author, and remarked upon the interest of the physiological grouping of muscles affected in infantile paralysis. He had been inclined to question the central origin of infantile paralysis; it had seemed to him that the peripheral nerve-endings had been much neglected, and he did not understand how an acute inflammation spreading by continuity in the grey matter could so constantly respect physiological limits. He certainly thought that, in the chronic cases, the change was central rather than peripheral.—Dr. STURGE, in reply, remarked that with central disease the influence of electro-therapeutics must be limited. It might restore a secondary wasting, but could not restore the diseased tissue. He used both the continuous and the interrupted current, and preferred the one with which he found he could obtain the more energetic result. In some cases of infantile paralysis certain groups of muscles were clearly picked out.

Dr. GILBART SMITH exhibited three machines used in the mechanico-therapeutic institution of Stockholm, and also photographs of others.

The Society then adjourned.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Retinal Hæmorrhages with High Arterial Tension.—Paralysis of both Third Nerves.

THE ordinary meeting of this Society was held on the 12th inst., W. Bowman, Esq., F.R.S., President, in the chair. The following card specimens were shown:—1. Microscopical Sections from a case of Optic Neuritis in an eye lost by corneal ulcer, by Mr. W. Lang. 2. Tumour (sarcoma) at cavernous sinus, causing complete paralysis of all branches of the third, fourth, and sixth nerves without affecting either the optic or the fifth, by Mr. Nettleship. The following living specimens were also exhibited:—1. Intra-ocular Tumour coming on in a young man who was already blind from post-neuritic atrophy caused by cerebral tumours, by Dr. Allen Sturge and Mr. Anderson Critchett. 2. Double Ophthalmoplegia externa, without other symptoms, in a lad aged eighteen, by Mr. Nettleship. 3. Case in which several years after an injury an Opaque Lens became dislocated into the anterior chamber, and then passed, when the patient was recumbent, into a pouch which had been formed by separation of the upper part of the ciliary body from the sclerotic. Living specimens were also shown by Mr. Spencer Watson and Dr. Allen Sturge in connexion with their papers.

Mr. SPENCER WATSON read notes of a case of Retinal Hæmorrhage with High Arterial Tension. A married woman forty-five years of age, whose menstruation had been regular up to two months before, but who had since not menstruated, had dimness of vision in one eye, which was found to be due to an effusion of blood in the region of the yellow spot. The arterial tension was found to be high, and though palpitations had been complained of, and great pain in one side of the neck and the corresponding shoulder, there was no discoverable disease of the heart, and no aneurismal dilatation of the aorta. Mr. Watson, by the advice of Dr. Sansom, gave nitro-glycerine in very minute doses, and this had the effect of relieving the pain. There was, however, no improvement in the state of the eye. Mr. Watson regarded the case as an instance of one of the local hæmorrhages likely to occur in women at the change of life. It was accompanied in this instance by long-continued and profuse epistaxis on one occasion.—Dr. SANSOM had seen several cases coming under the same category, presenting a constitutional tendency to high arterial tension, as pointed out by Dr. Mahomed, whose views Dr. Sansom endorsed. Such a tendency might be independent of any other pathological condition. In these cases he had often seen retinal hæmorrhage sometimes with symptoms of vertigo, sometimes headache, or pain in other parts of the body. In the present case, the condition suggested contracted kidney, but of this there was no evidence, but then that disease was very insidious. He had at present under his care a gentleman who had had retinal hæmorrhages, which had passed off leaving but slight traces, with considerable high arterial tension, and an extreme form of migraine. In that case there was no evidence of renal disease, and all symptoms disappeared under careful dieting. The attacks of migraine were controlled by nitro-glycerine, in doses of about $\frac{1}{100}$ grain. In another case, a woman with retinal hæmorrhages and high arterial tension, the cerebral symptoms were of the nature of vertigo, not pain. In another case there was intense pain at the epigastrium, which was benefited by nitro-glycerine. The pulse tracing in that case indicated atheroma of the aorta. In reply to Dr. S. Mackenzie, he added that there was no symptoms nor history of gout, and in reply to the President that in all these cases there is some hypertrophy of the left ventricle and accentuation of the aortic second sound.—Mr. BRUDENELL CARTER suggested that there must be some structural change in the arterial walls to account for the hæmorrhages, which could hardly be brought about by high arterial tension, a condition more likely to produce anæmia; as in the case of a boy who presented a pallid disc and pulsating retinal arteries, and in whom Drs. Anstie and Sturges found high arterial tension.—Dr. GILBART SMITH inquired as to the character of the second sound over the aorta, and the evidence of ventricular hypertrophy, which may be taken as the measure of the arterial condition.—The PRESIDENT remarked that the tension might be high in some parts and low in others, and that such inequality might be the cause of hæmorrhage.—Mr. CARTER said that if the effect of high tension was to diminish the calibre of arteries, hæmorrhage could not be explained; but the hæmorrhage of embolism was an instance of its occurrence when the tension was unequal.

Dr. ALLEN STURGE read the notes of a Case of Paralysis of both Third Nerves after an Apoplectic Attack. The patient, a boy aged sixteen, was seized while at his work, bottling beer, with sudden severe pain in the head, and giddiness; two or three minutes afterwards he fell down unconscious. He was taken at once to the Royal Free Hospital. He remained more or less unconscious for twenty-four hours, after which it was discovered that all the muscles supplied by both third nerves were completely paralysed. The pupils were not dilated, and acted, although sluggishly, to light, but the right pupil was slightly larger than the left. There was no other paralysis of any kind present. There was no optic neuritis. He suffered much from pain at the back of the head; the temperature was somewhat raised. Three days after admission a slight weakness was noticed in the left external rectus, which, two days later, had increased to complete paralysis. Eight days after the first onset power began to return in the right levator palpebræ, and subsequently in the left levator palpebræ, and in the recti in both eyes. He was discharged seven weeks after admission with complete return of power in all the muscles. Dr. Sturge remarked that this case was analogous to one exhibited by him at an earlier meeting of the Society, in which a paralysis of both third nerves, in conjunction with other paralyses, had come on after an apoplectic attack. He gave reasons for concluding that in both cases the lesion involved the central connexions of the nerves, rather than the trunks of the nerves, in their course from the brain to the orbit. To explain the relationship which these cases bear to other forms of ocular paralysis he referred to the anatomical facts ascertained in regard to the nuclei connected with the motor nerves of the eyeball, laying stress upon the fact, that although the chief mass of fibres forming the nerves appear to come from the so-called nuclei of origin, yet that in the case of the third nerve, at any rate, some fibres do not pass through the nucleus of origin of the nerve. When studied in the light of physiological experiment, it becomes evident that these nuclei of origin are not the sole portions of grey matter connected with the movements of the eyeballs, centres having been discovered which control the upward movements of the eyes; others controlling the lateral movements and so on. Independent centres for accommodation, for dilatation of the pupil and for contraction of the pupil, had also been ascertained to exist. All these centres

had to do with bilaterally coördinated movements, and the grouping of fibres and cells in them corresponds to the coördination of muscles rather than to the association of fibres in the oculo-motor nerves. *A priori* reasoning would lead us to suspect that we should have three types of oculo-motor paralysis:—(1) The true peripheral paralysis of eye muscles from involvement of the trunks of the nerves. (2) Paralysis due to lesions involving the nuclei of origin of the nerves, which would resemble the peripheral paralyses in many respects, but would present points of difference, for these reasons: (*a*) that all the fibres of the nerves do not emanate from the nuclei of origin; (*b*) that there are good reasons for believing that a low degree of coördinated association of muscles takes place in the nuclei of origin. (3) Paralysis due to lesion of the higher coördinated centres. In this type the association of the paralysed muscles would have ceased to correspond with nerve supply. Of this type there would be several varieties—e.g., (*a*) the paralysis might affect muscles involved in a single coördinated action alone, as the two superior recti; (*b*) the paralysis might involve all the muscles of the eyeball *except* those used in a single coördinated action—all except the two levatores palpebrarum, for example; (*c*) the paralysis might affect the centres for accommodation or for the pupils alone, or it might affect these in conjunction with some or all of the external muscles. Dr. Sturge then went on to consider to what extent these varieties are met with in practice, beginning with paralyses of the third type. In proof of the existence of the varieties (*a*) and (*b*), he quoted cases published by Mr. Hutchinson, Dr. Gowers, and Mr. Nettleship—cases to which Mr. Hutchinson has given the name "ophthalmoplegia externa." As examples of the existence of the variety (*c*), he quoted the cases described by Mr. Hutchinson under the name "ophthalmoplegia interna," which Mr. Hutchinson had attributed to disease of the ciliary ganglion. He mentioned that Dr. Gowers had suggested that the latter cases are really due to disease of the central nuclei governing the iris and ciliary muscle; and he made an analysis of Mr. Hutchinson's cases to show that they contain internal evidence that Dr. Gowers' explanation is almost certainly the correct one. Clinically, there are six varieties of this type of paralysis, corresponding closely to those which might be suspected on *à priori* grounds to exist. These are, paralysis involving: (*a*) accommodation alone, (*b*) accommodation + pupils, (*c*) accommodation + pupils + external muscles, (*d*) pupils alone, (*e*) pupils + external muscle, (*f*) external muscles alone. His own two cases of paralysis after apoplexy he believed to belong to the second type of disease, involving the nuclei of origin, giving reasons in favour of this view; and he called attention to certain points in the cases which threw light upon the physiology of these nuclei.—The PRESIDENT, in thanking the author for his valuable and interesting paper, hoped that the subject might again be raised at some future time when Mr. Hutchinson could be present.

The Society then adjourned to July 6th.

Reviews and Notices of Books.

The Cat. An Introduction to the Study of Backboned Animals, especially Mammals. By ST. GEORGE MIVART, Ph.D., F.R.S. With 200 Illustrations. pp. 557. London: John Murray. 1881.

EVERY student of biology must have learnt at an early period with surprise and regret how few monographs exist in our own or in any foreign language of even the commonest animals. In the larger text-books of comparative anatomy the general features of each class are given, and the prominent characters of particular members receive brief notice, but any point on which information is sought is sure to be omitted, and if he live where he has no access to the museums of a large centre, it is probable that he must at great loss of time work out the point for himself. The only animal which up to a recent period could be said to be even fairly well and fully described is the horse, in a work written by a distinguished army veterinary surgeon, William Percivall, nearly half a century ago. More recently the translation by George Fleming of Chauveau's treatise on the comparative anatomy of the domesticated animals, which treated mainly of the horse, ox, and sheep, but gave also many details of the anatomy of the pig and dog, proved a very valuable addition to our literature, and Ecker has supplied a partial and, so far as it goes, excellent account of the frog. We have now before us a monograph on the cat, which supplies what was greatly needed—a description by a competent anatomist of a typical member of the carnivora, and which from the care and accuracy with which it has been completed has evidently been a labour of love to its distinguished author. Mr. Mivart states that his present treatise on the zoology of the cat is the precursor of a companion volume in which the natural history of the entire class of mammals will be treated of. Such a manual worked up to the present day is much needed.

The early history of the domestic cat is uncertain. It is not the common cat of zoology, which is the wild or native cat, an animal that existed abundantly in the forests in the time of Julius Cæsar, and was seen in Wales within the last twenty years. It appears to have come down to us from the Egyptians, being mentioned, Mr. Mivart informs us, in inscriptions as early as 1684 B.C., and being, as is well known, an object of religious worship, and the venerated inmate of certain temples. It was an emblem of the sun to the Egyptians, and according to Herodotus the death of a cat from natural causes was followed by the ceremony of shaving the eyebrows in token of mourning. From Egypt it must have been introduced into Greece, though Professor Rolleston, in his article on Cats in Humphry and Turner's *Journal of Anatomy*, considers that the cat of the ancients was the *Mustela foina*, the "beech" or "stone" marten. It was not a domestic animal amongst the Hebrews, though it was known to them, as we read in the apocryphal book of Baruch, who lived, it is supposed, in the reign of Jehoiakim, about 600 B.C., that "upon their bodies and heads sit bats, swallows, and birds, and the *cats* also."

The main body of the work is occupied with a thorough, complete, and systematic account of the anatomy of the cat, each bone, muscle, nerve, artery, and organ being described, while space is found for a concise history of its development, and for the chief facts in regard to its histology. Numerous and carefully executed drawings illustrate the text. The chief kinds of cats are described zoologically, including those of the Old World—as the lion, tiger, leopard, ounce, clouded tiger, cheetah, and caracal, and those of the New World—as the puma, jaguar, ocelot jaguar, eyra, and colocollo, with the lynx, which is found in both hemispheres. The fossil forms of machaerodus, hoplophoneus, nimravus, and dinictis are also described—genera which have been found in Nebraska and other parts of the American continent in miocene deposits. Nor have even the parasites of the cat been overlooked, a short section being devoted to the olulanus, the most important of all the feline nematodes, the tænia, and the pentastoma, with the flea, louse, and itch insect. One of the most interesting chapters of the work relates to the pedigree and origin of the cat. In this Mr. Mivart maintains consistently the doctrines he has advanced in his "Genesis of Species and Lessons from Nature," and which are by no means in accord with the prevalent Darwinian views. In regard to its pedigree he traces it from unknown insectivora-like animals which produced, among other forms, arctocyon. From this, as a root, the carnivorous branch divided into cynoid and arctoid branches—the former developing into the typical canidæ; the latter, after giving off other branches, leading to the ursidæ, and through proelurus to the viverridæ, hyænidæ, cryptoproctidæ, and felidæ. In regard to the origin of the cat, Mr. Mivart has the following observations, which express very clearly the various modes in which the evolution of new specific forms may have been brought about:—1. The change may have been due, he says, first, entirely

to the action of surrounding agencies upon organisms which have merely a passive capacity for being indefinitely varied in all directions, but which have no positive inherent tendencies to change, or vary, whether definitely or indefinitely; secondly, entirely to innate tendencies in each organism to change in certain directions; thirdly, partly to innate tendencies to vary indefinitely in all directions, and partly to limiting tendencies of surrounding conditions which check variations, except in such directions as may happen to be accidentally favourable to the organisms which vary. Fourthly, partly to innate tendencies to vary indefinitely in all directions, and partly to external influences, which not only limit but actively stimulate and promote variation. Fifthly, partly to tendencies inherent in organisms to change definitely in certain directions, and partly to external influences acting only by restriction and limitation on variation. Lastly, to innate tendencies to change definitely in certain directions, and partly to external influences, which in some respects act restrictively, and in other respects act as a stimulus to transformation. Mr. Mivart himself holds that the genesis of new species is due mainly to an internal cause, which may be stimulated and aided, or may be more or less restricted, by the action of surrounding conditions, and he devotes several pages to the explanation and support of his previously expressed opinions. His argument is of great weight, and may fairly claim the adhesion of those who hold the doctrine of a Divine Creator acting through secondary laws in opposition to atheistic conceptions, under which category, however, the doctrine of Darwin cannot in any way be included. We have great pleasure in warmly recommending the work to all who are interested in zoology and natural history.

Notes on Antiseptic Surgery in War. By Surgeon-Major H. MELLADEW, Royal Horse Guards. Pp. 36. 1881.

SURGEON-MAJOR MELLADEW took advantage of his winter leave to visit the military hospitals in Berlin, Dresden, St. Petersburg, Moscow, Vienna, Munich, and Paris, for the purpose of studying the system of foreign military hospitals and "to gather hints about antiseptic surgery as applied to service in the field." In the pamphlet before us he has published the substance of his inquiries on the latter subject. He has come to the conclusion that the system must be extended to the wounded on the battlefield, but in a modified form, owing to the disproportion between wounded and surgeons, and also to the impossibility of providing the necessary equipment for its full employment on the battlefield. It appears that many of the surgeons are of opinion that spray diffusers may be dispensed with, but the important condition of scrupulous cleanliness of hands, instruments, &c., must be strictly enforced, with the use of antiseptic dressings, and abstention from unnecessary probing or fingering the wound. The author goes into some detail with reference to the various disinfectant dressings recommended by Professors Esmarch, Nussbaum, Neudörfer, Bruns, and Münnich, and gives a description of a "soldier's packet," devised by himself, which seems to him to answer all requirements. The subject is one which is to be discussed in the section for military surgery and medicine at the forthcoming meeting of the International Medical Congress. In view of this our author's notes are well timed, and will be found useful as showing in a condensed form the conclusions arrived at on the Continent as the result of actual experience of the system on active service.

AT a late meeting of the Woolwich Board of Guardians, a committee was appointed to inquire and report on the system of nursing adopted at the London, Charing-cross, and Great Northern Hospitals, with a view to the improvement of the nursing at the union infirmary.

THE OLD UNIVERSITIES AND THEIR MEDICAL DEGREES.

To the Editor of THE LANCET.

SIR,—I trust you will grant me space to criticise a statement likely to give rise to a good deal of misapprehension made by "A Cambridge Undergraduate" in his letter of the 14th inst. He there says—"Of Oxford I know nothing personally, but of Cambridge I may say this, that the practical hospital teaching is such that the majority of Cambridge students know no more of practical medicine and surgery *after four years' attendance* on the practice of Addenbrooke's Hospital, than an average London student knows after the first six months of his attendance in the wards of his hospital." From this statement one would suppose that the hospital teaching was extremely bad. Now, Sir, I and others with whom I have spoken, who, like myself, have studied both at the Addenbrooke's Hospital and afterwards at a large London Hospital, know that this is far from the fact. "Undergraduate" confesses that he knows nothing of the Oxford school, but when he speaks of Cambridge men spending four years at the hospital there he shows plainly that his knowledge of the Cambridge school is not much greater, for as a fact Cambridge students attend hospital practice for from two and a half to three years at the outside, and then pass on to a London hospital to *dress, clerk*, and gain a wider experience. The majority, I grant, do not learn much, not because the teaching is bad, but because they have before them triposes and other examinations which principally engage their attentions.

On the other hand, what is the state of the knowledge of the ordinary London student, as far as practical medicine and surgery are concerned, near the end of his second year? I have frequently found that he takes little interest in, and learns less at, the out-patient practice he is compelled to attend. The majority of second-year students know nothing of the therapeutic action of the drugs they see prescribed, or of the pathology and symptoms of the diseases which are brought before their notice; and I am not surprised, because, as they themselves own, their examinations in anatomy and physiology require their almost undivided attention, so that, as a matter of fact, the Cambridge student, having attended for two years and a half at the Addenbrooke's, finds when he passes on to London that he is but little behind London students of the same standing. Not unfrequently, however, men, after passing their second M.B., spend their long vacation and part of September at the Cambridge Hospital, and are then able to give their undivided attention to the work; and I have repeatedly heard them say that they have never met with a *better teacher* than Dr. Humphry, nor one who requires cases to be taken more thoroughly and accurately. As far as the rest of the staff are concerned I can bear ample testimony to their extreme willingness to teach those who show the slightest desire to learn. Therefore, let no one be dissuaded from becoming a Camb. medical student on the ground that the hospital teaching is bad.—Yours truly,

A CAMBRIDGE B.A.

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

To the Editor of THE LANCET.

SIR,—The annual election of pensioners and foundation scholars in connexion with the Royal Medical Benevolent College will take place on the 23rd instant. In accordance with a recently passed resolution, a committee has recommended certain candidates as being most eligible for election, and a printed form to that effect has accompanied each balloting paper. My object in writing is to bring before the notice of the governors the fact, that out of the whole list of candidates selected by the "examination committee," not one is either a widow or child of a deceased subscriber. I do not doubt the urgency of the various cases thus recommended, but maintain that we should be just as well as generous, and not lose sight of the special claim upon us of the widows and orphans of those who by noble self-sacrifice and frugality supported the very institution their survivors are soliciting succour from.—Your obedient servant,

Commercial-road, E., May 17th, 1881. T. RICHARDSON.

THE LANCET.

LONDON: SATURDAY, MAY 21, 1881.

THE question of hospital reform is ripening. The public and the profession are alike agreed that the present system of hospital administration is seriously imperfect, and in some respects essentially vicious. The charges of alleged abuse of the metropolitan hospitals as charitable institutions are loud and frequent, and though they have no doubt been greatly exaggerated, they are by no means devoid of foundation. The abuse is, however, to some extent unavoidable, and is largely due to the manner in which medical relief at hospitals is at present administered. The complaint is repeatedly made that many persons attend the hospitals of London as out-patients, or are admitted as in-patients, who are not fit objects of charitable relief, and who can well afford to pay. This is in a measure true, but it is not always easy to decide what they can afford to pay. They may be able to pay the smaller charges of an ordinary practitioner, and perhaps have done so for weeks or months, but they cannot pay a physician's or a surgeon's fee for a private consultation, or if they are able to pay once or twice they cannot continue doing so for weeks or months. For a person desirous of receiving specially skilled advice there is no alternative between applying at a hospital for gratuitous relief or paying the customary fee of the physician or surgeon. As long as the relations of the public to hospitals and to the profession, on the one hand, and of the profession to the public and hospitals on the other, remain as they are, the kind of abuse now complained of must continue, and cannot well be checked. That the evil ought to be remedied everyone must admit, though there may not be an unanimity of opinion as to how this is to be done.

The deputation lately received by the Home Secretary dealt with a comparatively small part of the question of hospital administration. The Home Secretary himself took a larger view when he expressed his approval of the desire for an inquiry, even by a Royal Commission, as to all the London hospitals. We believe that nothing less than such an inquiry can grapple with the whole of the facts of the case. The system of hospital relief needs to be reconstructed, and in the process of reconstruction the interests of the profession will have to be considered. Sooner or later the plan of making some out- and in-patients pay a distinct charge will have to be tried, and in carrying out this plan it will be necessary to conciliate the rival sections of medical practitioners—namely, the physicians and surgeons attached to the hospitals on the one hand, and the general practitioners on the other. Whether the members of the medical and surgical staffs of hospitals should in all cases be paid for their time and service may be an open question, but no one can seriously maintain that this time and service should be given without remuneration to persons who are made to contribute towards the funds of the hospital for the advice they receive. When patients are made to pay it is certain the medical officers will have to be remunerated.

The matters that demand most attention and consideration just now, are whether all hospitals should continue as charitable institutions affording gratuitous relief or not; and whether the medical officers should be paid for their services to these institutions or not. Out of these considerations will arise many others—such, for example, as the difference between hospitals that offer facilities only for the relief of the sick poor, and those which, in addition, by being connected with a medical school, become centres for the training and education of medical practitioners. In any scheme of medical reform, these two classes of institutions cannot be placed in the same category. The essential *raison d'être* of the two is different, though their ultimate aim is not so dissimilar as some have imagined.

IN the course of the recent controversy arising out of considerations of ethical propriety in regard to the consultation of orthodox professors of scientific medicine with actual or reputed homœopathists, nothing has so much surprised us as the inexplicable ignorance which prevails, not only throughout the lay community, but among medical men, as to the nature and effect of "homœopathy" and "allopathy" as medical theories. We have laid down the proposition that *similia similibus curantur*—or *curentur* as some would have it written—involves a fallacy. It would of course occasion no astonishment if this assertion were challenged, but it does not seem to be understood. Lest this strange circumstance should be due to some obscurity in our way of putting the facts, let us state them again. The homœopathist says, "I select a drug which if given in a large dose to a healthy person would produce symptoms *like* those of the case I am seeking to cure, and I give this drug, when found—in a small dose." The ordinary practitioner asks, "Why do you not give it in a large dose?" The homœopathist replies, "Because it would increase the symptoms I desire to remedy." In short, the homœopathist *avoids* the dose in which the remedy he selects is *homœopathic* to the disease, and gives it in a smaller dose. Now everyone knows that the "effects" of medicines differ with the doses in which they are exhibited, giving rise to "symptoms" which are seemingly contradictory, in large and in small doses respectively. It follows that the so-called "homœopath" does not practise on the principle *similia similibus curantur* (or *curentur*). He only resorts to the principle embodied in that aphorism in selecting his drug, and by so doing goes a roundabout way to discover the remedy, which lies close at hand, and which the "allopath," if there were allopaths (or antipaths), might claim as acting on the principle *contraria contrariis curantur*. We are anxious to make this plain to our readers, and especially to those who are interested in the present discussion, because it is the key-note to what we allege to be the *fallacy* of the homœopathic school; and it explains the reiterated assertion made by homœopathists, to the effect that remedies which they believe to act *homœopathically* are recommended by accredited authors in standard works on Therapy. It must be so. *All* remedies lie open to the charge or claim of being "homœopathic" if the homœopathist may class them by the effects they produce when given in one dose,

while he employs them in another dose, of which the effect is totally different, and nearly always opposite.

Take the case of aconite. A moderately full dose of this drug will produce the local and general "symptoms" of fever and inflammation—if we may employ terms loosely. In a smaller dose its effects are such as to raise the tone of the vascular system, and, while acting on the skin, to reduce the local and general symptoms characteristic of the state called "feverish" and "inflammatory." What measure of *homœopathy*, then, can there be in selecting aconite for the "cure" of fever and inflammation because if given in large doses it will produce symptoms "like" those supposed to characterise these remedies, whereas it is given by the homœopath in a small dose, in which it produces totally different effects? It would be just as rational—and no more so—to assert that aconite produces the symptoms of fever and inflammation "allopathically" or "antipathically," because, being selected for its antiphlogistic effects when given in a small dose, it was followed by contradictory results when given in a large dose. Again, take the case of "nux vomica," another important drug claimed as "homœopathic." In large or full doses this medicine irritates the stomach and causes spasms. We are purposely using popular language in these definitions. If pushed far it will produce tetanic contraction of the muscles, and in toxic quantities the well-known phenomena of death by strychnia poisoning ensue. The homœopathist, recognising these effects of a large or accumulated dose, argues that the remedy will cure diseases exhibiting symptoms *like* those it produces. He therefore gives it for gastric disturbances; for dyspepsia, especially with spasm; and probably he would give it for the graver affections resembling those it is supposed to produce; and while he claims it as a "homœopathic remedy," he seeks to convict the ordinary practitioner of medicine because he, too, recommends it. Now, how do nux vomica and its preparations act in small doses? Why, as tonics to the muscular system. In short, the natural effect of a drug which is a powerful excitant when given in large doses is that of a gentle and restorative or strength-giving stimulant in small doses. The homœopathist affects to give the drug because it will produce the symptoms he desires to cure, but, we repeat, he avoids the dose in which it might produce these effects, and gives it in a smaller dose, in which its effects are directly contradictory. We might follow out the list of the Materia Medica in the same way. A small quantity of alcohol will stimulate the cerebral functions and quicken the intellectual and nervous functions, while a larger dose will depress and stupefy. A large dose of ipecacuanha will produce vomiting, while a small dose will act gently and restore the tone of the organ, thus allaying vomiting. A small dose of opium will excite, a large one acts as a sedative. In the same way large doses of "cathartic medicines" act as aperients, while small—or relatively small—doses produce constipation; or conversely, drugs which may be cathartic in small and moderate doses—as calomel—are distinctly sedative or constipative when given in large quantities. Scientific explanations of the way in which these apparently contradictory effects are produced by the same drug in different doses are ready to hand, but they have no place in this argument. Our immediate purpose is to demonstrate that the homœopath does *not* give his drug on homœopathic principles, and cannot claim it as homœopathic, because he employs it in doses which do not produce effects like, but widely *unlike*, the symptoms of the disease he seeks to cure. It follows that, so far as the *action* of remedies is concerned, homœopathy is a misnomer, and involves a fallacy.

We shall be curious to see how the homœopathists attempt to answer this objection. If they are honest men, they must confess that we are right, and that the *homœopathy* of their system concerns only the mode of selecting drugs, not their action. Should they take this ground, we shall then have to show that it, too, is untenable, because the selection of a drug by an inverse process of induction from its supposed effects can never be a sure or safe guide to its use. Moreover, it is unscientific to speak of a drug as producing "effects" or "symptoms" in the organism. In studying the properties of a medicine, it is always tried in the healthy, and the student of therapy knows well that there is nothing mysterious in the seemingly contradictory effects of different doses of the same substance, seeing that the so-called "effects" of a drug are the changes of state or modifications of function which take place in the organism under its influence or with its aid. The effects are not located in the drug! Before we can predicate any "property" of a drug, we must take into the account the properties of the organic state and functions with which it is to be brought into relation. For example, if a muscle fibre is inactive, a stimulant will either elicit healthy action, or excite it to morbid spasm, or paralyse it by exhaustion, in proportion to the organic state of the fibre, the integrity of its nerve-supply, and the amount of energy available for its use. It follows that the only *rational* way to try a drug is first in health and then in disease. In short, it is not possible to predict the "effect" which will follow its use until we have actually tested it first on a healthy and then on a morbid organism. The pretence of selecting remedies on any principle or theory of their mode of action in health alone is manifestly an affectation of the impracticable. The homœopathist does not choose his drugs on the principle *similia similibus curantur*, even making allowance for the fallacy we have already demonstrated. He falls back on his *experience*, and he knows perfectly well that he would not on any account give a drug in a dose in which it might be supposed to act *homœopathically*, because that would be to aggravate the symptoms he desires to relieve. And he would not give a drug, even in a small dose, simply because it produces "like" symptoms in a large dose, since it might so happen that a still larger dose would be required to produce the effects he desires to secure. In truth, so far as the homœopathist is a *practitioner* of medicine at all, he must and does employ drugs on rational and common-sense principles, and his parade of a special theory as to the action or selection of his drugs is schismatic as regards his profession, and an absurdly fallacious procedure as regards the public. We venture to suggest for the consideration of honest and intelligent thinkers now connected with "the homœopathic school," whether a recognition of the truth of our reasoning, and a consequent repudiation of the errors exposed, would not offer a timely occasion for recon-

cilement with the medical profession, on grounds welcome to both parties in this regrettable alienation and controversy.

PROBABLY the appointment of judiciously selected committees to investigate and report upon the whole or some particular question connected with the treatment of diseases is one of the highest functions of the Clinical Society. It certainly was one in which the late President took particular interest, and during his term of office several such committees were appointed and duly presented reports. But it will perhaps be generally admitted that the subjects of their investigation were in no case so generally important as that of the nature and operative treatment of Hip-joint Disease, which has been specially studied by a very influential committee for several months. Their report has just been presented, and while we print elsewhere an abstract of it, we would wish to notice here some few points suggested by it.

The first fact by which we are arrested is that the whole ground is by no means cleared, and some of the questions taken up are left pretty much where they were: e.g., the true nature of the change in morbus coxæ—whether it is strumous, tubercular, or "simple." Nor do we find in the main general principles insisted on, in any particular, a marked departure from the usual teachings of the schools on this subject. The one point in regard to the nature of the disease which is laid stress upon is the frequent occurrence of necrosis of the bones and the formation of larger or smaller sequestra, the percentage of such occurrences being placed at 59. Unfortunately we are not clearly told the data from which this conclusion is drawn—whether the specimens examined were only the parts removed in excisions and amputations, or whether they included other preparations in our museums; indeed we must express our conviction that in assigning any special percentage-frequency to the occurrence of necrosis the Committee have rendered their report liable to misunderstanding. Such a fact could only be ascertained by an examination of a series of specimens representing all grades and forms of the disease, the milder of which are but very rarely met with in our post-mortem rooms, and still more rarely preserved in our museums. Again, the treatment to which the unhappy subjects of this disease are submitted plays a very important part in its course. Too often the children are neglected in the early stages of the disease, when alone treatment can be thoroughly successful; or they receive such intermittent care that the resulting failure dissuades the parents from other and more patient efforts for recovery. We must not look upon any results which may be thus occasioned or modified as sequents of the disease alone, or as showing its inherent nature and course. We do not question the accuracy of the Commitee's result so far as it goes, but we desire to point out that it must not be deduced therefrom that necrosis to a greater or less extent does or must recur, from the nature of the affection, in 59 per cent. of cases of hip-joint disease. Necrosis, in fact, is but an accident in bone disease.

The doubtful points which it was hoped the Committee would clear up were—1st, the real benefits conferred by excision of the joint, especially as to its protecting the body from fatal tuberculosis, and the ultimate value of the limb for progression; and, 2ndly, whether there was any special form of the disease that could be clearly recognised, which was a reliable indication for excision. The answer made to the first inquiry is that in a number of cases which run their course without suppuration, tubercle in some one of its forms leads to the death of 7 per cent.; in cases with suppuration, and where excision is not practised, this disease is fatal in 9½ per cent.; while in a series of cases that have been submitted to excision of the diseased structures, the mortality from tubercle in all its forms amounts to 13½ per cent. But excision appears to lessen the liability to tubercular meningitis, for in cases operated upon this form of tubercle occurred in 4½ per cent., in cases of suppuration not operated upon 6 per cent., and in cases without suppuration 5½ per cent. Until there is a clearer definition of tubercle than can be given now, and a more general agreement as to the changes to which the term should be applied, all inferences from such statements as the above must be drawn with diffidence. Are we to say that the tubercular diathesis caused the suppuration and led to such extensive disease that excision became necessary, or are we to view the facts in the other light, and maintain that the production of tubercle increased in proportion with the greater severity of the disease? Indeed, both views may be right. But, further, if phthisis plays, as no doubt it does, an important *rôle* in the causes of death, we must not ignore the fact that the treatment to which the severer forms of morbus coxæ are subjected is in many cases just that which predisposes to the outbreak of pulmonary diseases: the prolonged rest in bed, interfering both with the digestion, general nutrition, and particularly with proper performance of the respiratory function, must not be left out of sight; and if to this we add the greater pain and anxiety, we see at once that there lie outside the primary disease explanations for this varying tubercular mortality. The facts would seem not to warrant the view that the severer forms of the disease are dependent upon the tubercular diathesis; the difference in the tubercular mortality in the mild and most severe cases is too small to support such a great deduction. The statistics in reference to tubercular meningitis are, however, of special interest, as there is not the same difference of opinion as to the proper use of this term, as exists in other diseases, and the peculiar pathological changes have received a pretty uniform interpretation. It is also characterised by the presence of that particular form of tubercle—if, indeed, there be other forms—which has been shown to be produced artificially by inoculation experiments. We find that its frequency is but little different in cases that suppurate and those that do not; while it is distinctly less in the cases that have been subjected to excision, as if removal of the diseased part had an important bearing on the issue. We should be inclined therefore to correct the statistics as to tuberculosis in general by those relating to tubercular meningitis in particular, and to hold that inoculation may take place both from suppurative and non-suppurative arthritis, and that removal of the part lessens this danger.

This leads us to observe that the facts in this report do not lend support to the view that early suppuration, or suppuration at any period, is an indication of the tubercular nature of the primary disease. On the other hand, general

pathological facts teach us that we may regard such a termination of the disease as an indication of either intensity of local action or diminished power of resistance—which may be a purely local or a general phenomenon,—or of both of these conditions combined. Constitutional deficient power of resistance may be fairly held to explain the cases of so-called tubercular disease in which the pathological change is not the development of grey granulations. We arrive at the same conclusion if we view the same facts in another light. If the cases of suppuration were examples of tubercular ostitis, and those of non-suppuration of simple ostitis, over and above those instances in which from either form of disease inoculation of tubercle in the cerebral membranes might be supposed to occur, there would be a certain number—and the history of general tuberculosis shows it to be a large number—of cases in which those membranes would be affected contemporaneously with the primary tubercular affection of the bones; while such is shown not to be the case. The value of excision from this point of view, then, is that it removes a distinct source of "tubercular inoculation." Before leaving this part of the subject we must express our fear lest this report should give any sanction to the opinion that the disease, as it affects the hip-joint, is different from that met with in the knee and other articulations. The pathological processes are inherently the same, modified only by certain local peculiarities, the most important of which is that the necessary mechanical treatment only too often entails confinement to the house if not to bed, while the same disease attacking the elbow or the shoulder does not prevent the patient having due exercise and fresh air. The conditions are simpler therefore in disease of the joints of the upper extremity, and pathologists would do well to bring their particular views to the test of these affections, rather than study exclusively the disease as it affects the knee or hip.

We can only further note that the report of the Committee bears out Mr. HOLMES'S view, which he expressed at Cambridge, that the limb left after excision is more often an imperfect one than that after recovery without operation, even where suppuration has occurred. When it is remembered that it is the humbler classes that afford the very large majority of cases of morbus coxæ, the great, almost paramount, importance of this consideration becomes apparent. Rigidity is the great requisite in the lower limb, and to some it may well seem that even the saving of life itself hardly compensates for the life-long burden of a useless limb.

THE great problem of medical reform is to reduce the number of mere licensing bodies, and to improve the conditions of obtaining a licence to practise medicine. We showed last week that centuries ago the notion of licensing to practise medicine was very like the notion of licensing to sell spirits or beer—a local affair, and an affair of money-making. It has ceased now to be a local or parochial matter merely, but it still continues to be an affair of money-making. The licensing bodies still depend on the money they make by licensing. At east it is undeniable that the love of money has led them into lax uses of their licensing function, which have been detrimental to the profession and the public. Of course, the abolition of the mere local character of the licence to practise has added greatly to its money value. A licence that includes the empire is more valuable than one that covers only four Scottish counties, and still more so than one that applied only to as much of Edinburgh as was included within the walls of the ancient city. The corporation whose powers were before 1858 so limited, and by the Act of 1858 were so enlarged, has naturally displayed the greatest tendency to excess in the money-making use of its diplomas. The late Professor SYME estimated that in one year after the passing of the Act this corporation made £10,000 by the easy gift of its lowest diploma. It is clear the abolition of the local jurisdiction of diplomas ought to have been accompanied with a reduction in the number of diploma-granting bodies, with securities for those that were left being conducted with equal severity, and under no temptation to make money by the exercise of this most responsible function. The Act of 1858 took no such securities. It left nineteen bodies to confer licences at their "own sweet will," and it is now well known that if one body has a strait gate, others have very elastic portals, that admit the entrant with what may seem a little pleasant pressure, but without friction or contusion. We are speaking now only of the lowest diplomas—not of higher qualifications—such as degrees, fellowships, &c., which will have to be considered by-and-by; but of the nineteen portals which it has been found simply impossible to control under the Act of 1858, simply because they were nineteen, and because the supervising Council of Education was practically a Council made up of the nineteen bodies to be supervised.

The terms of the Commission include a full inquiry into the nature and action of the Medical Council, its constitution, functions, powers, and procedure, its relation to the various bodies and to the medical profession. A Medical Council could not well be composed of members of more obvious influence and respectability than the present Council. It is composed chiefly of men in the consulting ranks of practice, and holding high places in the various nineteen bodies represented in the Council. But the representation is most peculiar. The Irish Apothecary Society, which is essentially a trading company, and the Faculty of Physicians and Surgeons of Glasgow, which before 1858 used to give licences to practise in four counties only, have each a representative, whereas the Edinburgh University, with over 3000 students, of whom 1600 are medical students, has only half a representative—that is to say, the University of Aberdeen and that of Edinburgh have one representative between them. Even if the representation of bodies were more proportionate to their professional value and importance, it is a grievous fault of the Medical Council that it consists so predominantly of bodies pecuniarily interested in the retention of half diplomas and of their own traditional individuality. The consequence of this feature in the constitution of the Council is that all changes and improvements suggested in medical education or in examinations for diplomas are viewed from nineteen points of view, and generally frustrated by the conflicting opinions and interests of the different bodies with which ultimately the decision rests. This brings us to another fatal defect in the Council. It has no authority. Its conclusions take the form only of Recommendations, and are not binding on the bodies. The Commissioners may easily satisfy themselves that many of

the most momentous Recommendations of the Council remain unfulfilled and inoperative for want of this element of authority in it. What is worse, because more significant of the faulty constitution, is the fact that the Council has always shown an unwillingness to be made a responsible body. It meets at a great cost. It numbers twenty-three or twenty-four members of the highest personal and professional position. Yet it is always reviewing and repeating its debates and its conclusions, and always being reminded that they are not operative. It is afraid of the bodies it represents, or acts as if it were so. It has, further, ever been regarded as a grave defect of the Council that it contains no direct representatives of the profession. Considering that it exists to regulate the education and the examination of general practitioners, considering that the Council is maintained by what is to all intents and purposes a tax on general practitioners, that one of its great functions is to keep a correct Register of the profession, and, finally, that it has the judicial power of removing practitioners from the Medical Register for "infamous conduct in a professional respect," it seems most unreasonable that the profession, apart from its mere corporations, should be unrepresented. There was an understanding at the time of the passing of the Medical Act that the Crown representatives would be chosen from the ranks of the profession; but as a rule they have been prominent members of the Corporations already over-represented. It is not necessary to deny that the Council is composed of most respectable members of the profession, nor even that it has done a certain amount of good. What we are concerned to show is, that considering the personal character of its members, it should have done much more good than it has done. It has added enormously to the severity of examinations without having added correspondingly to the simplicity of the examining system or the efficiency of the medical schools.

Annotations.

"Ne quid nimis."

EARL DERBY ON HOSPITALS AND PROVIDENT DISPENSARIES.

IN his speech at the festival dinner in aid of the Middlesex Hospital on the 13th inst., the Earl of Derby made some very judicious remarks. He pointed out that large hospitals were absolutely necessary for the treatment of the many sick whose homes were incompatible with proper care of the sick; whilst strongly expressing the hope that the country would in time be covered with provident dispensaries, so that people may contribute to their own support and recovery when they are ill, he justly remarked that no dispensary system, however perfect, would meet the requirements of those grave and dangerous cases which can only be dealt with in institutions where skill and attention were ever at hand. Provident dispensaries would relieve the over-burdened out-patient departments of our hospitals, and that would be a great gain; but they could never replace the advantages derived from hospital wards. Besides, hospitals are "schools of medicine, by which the wealthy profit quite as much as the poor and working classes. A rich man can always command the best medical skill, but the physician or surgeon who attends him would be greatly wanting in skill and efficiency if he had not acquired experience in the great hospitals. Again, in rural districts you have, happily, frequent and kindly intercourse between the rich and the poor. If the labourer is ill, the squire, his neighbour, does what he can for him. Here there is a different state of things. No one knows who his neighbour is in a vast city like London. But if you are to have no intercommunion between the rich and the poor, you will have the one class selfish and morally low, the other hostile and revolutionary. How are they to be brought together? Of all kinds of help that can be given to the poor in a place like London there is none so free from dangerous abuse as that offered by hospitals. However undeserving a man may be, you do not want him to die of disease; and, as regards imposture, a man may for money simulate disease, but unless he is half a maniac he will not do so to get into a hospital. Therefore a man who gives his money to one of these great London hospitals may fairly be described as not only benevolent but beneficent." These words of appreciation for the good work done by hospitals, coming from one who is not prone to form hasty judgments, must be full of encouragement to those who devote much of their time and energy to the development of these institutions, the maintenance of which, in a proper state of efficiency, is becoming every year a matter of increasing difficulty.

THE ANATOMY OF GHOSTS.

THE hypothesis offered by Mr. Francis Galton in explanation of the phenomenon of "mental images"—namely, that the mind builds up the mental picture on the foundation and with the materials furnished by external objects, as "children and sick people get faces and forms from paper-hangings and curtains"; the eye seeing little, and the mind supplying the rest of the idea, is not new, though it may be true. Leonardo da Vinci, the great painter, showed his appreciation of this method in his direction "To compose a Battle Piece"—namely, to stare at a smoked and daubed wall until the confusion suggests the desired conception. And the same explanation has been submitted by all writers before and since the time and speculations of the author of "Demonology and Witchcraft." The chief merit of Mr. Galton's contribution to the literature of this subject is the admirable summary he has given of the known facts with regard to the association of sound and colour with form. The manner of this association is unimportant. It is the result with which we have to deal. Meanwhile, none of the theories or hypotheses raised by the expounders of hallucinations are entirely satisfactory, because they either do not recognise, or they practically disregard, some of the most potent factors in a class of experiences which has long constituted the opprobrium of introspective science. A man sees a ghost; to him it is as *real* as anything else he sees, and it is not to be explained away or accounted for by any reasonable process of argument. A reference to the power of the imagination will not satisfy the subject or victim of hallucinations. If he be weak-minded he will insensibly come to believe in their reality; and, even if he be strong-minded, they will worry and annoy, perhaps mislead, him. It is, therefore, a matter of moment that what we may designate the anatomy of ghosts should be scientifically investigated. By way of suggestion, we venture to throw out the following hints. Every personality or consciousness has surrounding it an atmosphere of its own, with clouds of hazy impressions and nebulous thoughts and all the apparatus necessary for mental spectres, from which the mind receives back more or less accurate, or distorted, reflections of its own ideas. In addition to this proximate source of "mental images"—which are external to the observer, and yet the mere reflection of his own mind—there is the remote, or true external, which is

seen *through* the atmosphere, the surroundings or environment, of the mind itself. Such external objects as have a life and individuality of their own, have also *their* environments and systems of reflexes. So that what we see with the "mind's eye," when thinking of another person, is the aggregate or mean—or resultant—of our previous images of him. These images are made up of what we have in past times seen through our environment, and had reflected back from it, together with whatever impressions may now reach us through the environment of the person modified by his reflexes, and through our environment modified by the disturbing influences which it also must exercise on the impression we seem to receive. In short, every living object which is external is seen through two environments, and the image we form in our mind is modified by two sets of reflections. There is no such possibility as seeing things as they *are*. We see things as they are presented by the external, and as we think of them. It is at once obvious how many sources of fallacy there are, and how many possible ways of introducing new images, or of changing those which are transmitted, actually exist. A ghost may therefore be formed of materials cast up in either, or all, of four processes in the seemingly single and instantaneous mental act of observation. 1. We perceive an external object which suggests a thought of some person. 2. We seem to see the object in the form in which it has been presented to us on previous occasions and associated with remembered characteristics of colour and sound. Form, colour, sound, and even odour, or touch, stand on precisely the same footing as regards their mental associations, and either may play the part of a first agent or key-note in producing the impression. 3. When we see a form or colour, hear a sound, smell an odour, feel a touch which has been associated in our minds with the form of an absent friend we may be, as it were, visited by his ghost, or, in other words, the fragment of real external will call up, seemingly around it, but actually in our minds, the complementary properties of the object. 4. Receiving the picture projected from without, adorned by the memory of previous impressions of its subject, we still further develop it, adding the impression of our own present reflections, and probably finishing the picture according to the mood of the moment, making the "mental image" grave or gay, and adapting it to the supposed associations of the individual as we think of him under the influence of any fear or fancy our minds may cherish with regard to his condition or circumstances. The whole of this building up or fashioning of ghosts may be comprehended within Mr. Galton's hypothesis, or it may not. We do not quite gather the fact from his lecture. It is easy to say that "the eye sees little and the mind supplies the rest of the idea"; but this would not be the whole truth, because the mind takes the material for its construction of the ghost organism, not wholly or even in great part from its own inner chambers of imagery, but from the physical record of impressions which, if, at the moment, past, were originally received and not conceived. We should be glad if the view actually entertained by Mr. Francis Galton could be more definitively communicated. The subject is one of great practical interest to the sick, and to many who seem, and believe themselves to be, sound of mind and body, to wit, the whole class of "spiritualists" or believers in spiritism.

MEDICAL REFORM AT BRADFORD.

THE enemies of medical reform take pleasure in misrepresenting the aims of its friends. They say that the medical profession has no higher wishes than to get larger fees and more exclusive privileges. The great memorial of the profession in 1869, signed by nearly 10,000 practitioners, refuted this calumny. The following recommendations, arrived at at a meeting of the profession of Bradford and neighbourhood, will serve as another proof that, however medical men may be bent on maintaining the interests and dignity of the profession, it is their conviction that these are to be maintained chiefly by thoroughgoing measures for upholding and testing education, medical and general. The following are the recommendations agreed to by the meeting.

1st Recommendation: "That this meeting recommends a one-portal system of examination and admission to the medical profession for the whole kingdom, with various examining stations. The examiners should be appointed by the State; say nineteen from the present examining bodies, six by the State, and six by the general body of the profession. That the qualification given shall be an all-round one. Corporations still to give degrees when called upon." 2nd Recommendation: "That Preliminary Examination be high, embracing as essentials, Latin (so as to read easy authors), Greek (so as to read the alphabet and look out roots in the dictionary). One foreign modern language also to be necessary. The above to be passed before the commencement of any medical studies whatever." 3rd Recommendation: "Before commencing his more exclusively medical studies, the student should pass a second examination in physics, botany, natural history, and chemistry. A pupilage of at least twelve months with a qualified medical practitioner should also be required before obtaining his diploma or qualification to practise." 4th Recommendation: "Medical curriculum to extend over three years after the above examinations have been passed." 5th Recommendation: "Only duly qualified persons to practise as assistants."

EUCALYPTUS GLOBULUS AS AN ANTISEPTIC.

THE last meeting of the Clinical Society was of considerable interest to surgeons, and especially to those who practise antiseptic surgery as taught by Professor Lister. The subject of carbolic intoxication was raised by Mr. Pearce Gould, who asserted that he had had a fatal result from it, and Mr. Lister assented to his views, so that we may speak with confidence of their substantial truth. For the first time exact minute pathological changes were identified with the toxic effects of the acid in man, and although the observation needs corroboration, it yet throws light upon much that has been hitherto obscure. We are glad to observe that there was no attempt made to make this case a text for an attack upon any "system," or even upon carbolic acid itself. And we are particularly glad of this because Professor Lister was better able to make an important statement, which was a most welcome sequel to such a case. He frankly recognised the fact that there are some persons injuriously affected by carbolic acid, and that while many substitutes for it—thymol, salicylic acid, sulphurous acid, and so forth,—have been tried at various times, they have all been abandoned on account of drawbacks, even more serious than that attaching to phenol. His trials, however, of the oil of Eucalyptus globulus have shown him that while entirely free from toxic or locally irritant effects, it is a perfectly trustworthy antiseptic. Where, therefore, we have reason to fear carbolic absorption or where the carbolised gauze causes toxic effects, the oil of eucalyptus may be used without in any way imperilling the results of so-called asepticism. But the oil has its own drawbacks: one is its insolubility in water, and another the rapidity with which it evaporates from most of its solutions. An oily solution would very quickly become quite inert as an antiseptic for this reason; resin holds it in combination more firmly, but dammar gum, such as is used in mounting microscopical preparations, is better still, and has been chosen by Professor Lister as the medium for its employment. Gauze impregnated with this mixture and paraffin has been prepared, and is in appearance and feel exactly like carbolised gauze, but unlike it in having an agreeable aromatic odour. Obviously

there are other details yet to be worked out, and experience warrants the hope that Professor Lister may soon be able to announce that he has overcome the difficulties they present, and that this new and safe antiseptic can be used as generally and as easily as carbolic acid. In its cost it probably will never rival the acid, nor is it certain that it will supersede it entirely; indeed, Mr. Lister did not for a moment hold out any such idea. Carbolic acid has been well tried as an antiseptic agent, and what we are really in need of is some guidance as to the circumstances in which it is liable to act injuriously. However hopeful we may be at the discovery of an antiseptic agent which is safer than those we now possess, we should yet gladly welcome any additions to our knowledge as to the true meaning or cause of these so-called "special susceptibilities," "idiosyncrasies," and the like, which make the means of life to one man the very cause of illness or death in another. Perhaps it is hardly to be hoped that a perfect antiseptic agent devoid of toxic properties for the human body will ever be found; for there are some, if not many, fundamental conditions alike required for the highest and the lowest forms of life. The laws governing the development of the bacteria and similar minute organisms, which are roughly classed together as germs, are probably the same, or at least closely allied to those ruling the growth of the cellular constituents of our own frames. And surprise ought not to be so much excited by the occasional occurrence of toxic symptoms when antiseptic surgery is practised, as by the more striking fact, constantly observed, that these agents can be used with entire success to destroy and prevent the development of these "germs" without destroying or even affecting injuriously the vital processes so akin to them. It would be an easy matter to speak with enthusiasm of this statement of Mr. Lister, and to prophesy the attainment of perfection in the antiseptic treatment of wounds, now that he has provided us with an agent that may be called safe and certain. All such enthusiasm would be out of place, however; the new preparation must be patiently tried; and although it is only right to entertain the hope that it will be found of extreme value, it is demanded in the interest of science that any expression of opinion as to its merits should be suspended until the facts are fully before us. It is not, however, too early to draw attention to the fact that Mr. Lister has afforded us another example of his devotion to science. His name has for years been associated with the use of carbolic acid in the treatment of wounds, and with it he has accomplished remarkable results; but he has kept his mind so open to its defects, that, being the most earnest in the search, he is the first to herald the discovery of a substitute for it. Would that all of us who have some pet theory or practice could learn this lesson!

BRIGADE SURGEON E. L. LUNDY, A.M.D.

THE Indian papers report the death of Brigade Surgeon Lundy, at Allahabad, on the 19th of April, under very painful circumstances. It appears that a few days previously he returned from Deolali to settle some matters which had occasioned him a good deal of trouble. On the morning of the 21st he went to the hospital and obtained three or four drachms of poison, the nature of which is not specified in the account which has reached us. He then returned to his hotel, where he was shortly afterwards found in his room breathing heavily, and quite insensible. Medical assistance was at once obtained, but he died in a few minutes afterwards. The verdict of the coroner's inquest was that he died by poison taken when in an unsound state of mind. Mr. Lundy was an officer of long and distinguished service. He served throughout the Crimean War, and was present at the battles of the Alma and Balaklava, and at the capture of Sebastopol. He went through the Persian Campaign of 1857 with the 64th Regiment, and was in the Indian Mutiny with Havelock's column as well as at the defence of the Alum Bagh, the defeat of the Gwalior Mutineers at Cawnpore, and several other minor engagements. Brigade Surgeon Lundy was much esteemed as an able, efficient, and zealous officer. We regret to add that he has left a wife and family.

THE NEW MEDICAL CORONERSHIP.

THE triumphant assertion once more of the preference in the metropolis for a medical coroner is a subject for great congratulation. The triumph indeed was so complete that the only danger before Dr. Thomas is that of thinking too lightly of an office which has come to him so easily. We do not think that Dr. Thomas is likely to make such a mistake, or to undertake the duties devolving upon him with an inadequate sense of their responsibility; but there can be no harm, when the desired result has been so successfully achieved, in stating what we expect from the election of a medical coroner. We expect, above all things, that the work he has to do will be so done as to bear the criticism of the medical profession. Every week brings us reports and complaints of the perfectly useless and formal way in which inquests are conducted without eliciting any data for an intelligent opinion as to the cause of death. We have a right to expect from a coroner of Dr. Thomas's character, and elected as he has been, that inquests shall be so conducted as to carry the respect of those best able to judge. Where an inquest can be dispensed with, for the sake of friends and human feelings, by all means let it be dispensed with; but when it cannot, let the evidence taken be of the best. It often lies entirely in the discretion of a coroner to select persons to make post-mortem examinations, on the revelations of which the accuracy of the conclusions of the jury entirely depends. He may leave this selection to a subordinate, whose choice may turn upon very irrelevant considerations. This is a duty which should be discharged not by the officer of the coroner, but by himself. On other occasions, too, even medical coroners, for the sake of a little passing popularity, have dispensed with medical evidence altogether, when without it an inquest was an unmeaning farce. We trust Dr. Thomas to avoid such errors. He owes his election to the intelligent preference of the public, guided by the profession, for a medical coroner, and we look to him to hold high the reputation of a medical coronership for dignity and usefulness.

ALLEGED INHUMANITY AT HAWARDEN.

WE have read with great pain the newspaper report of the Government inquiry into the death of the children of William Francis, of Stryt Issa. It is much to be regretted that Dr. Moffatt did not see the cases sooner, but it seems to us that of all the officials concerned he was perhaps the least to be blamed. It is a strange illustration—to which under less "urgent" circumstances we should have called the attention of the Premier himself—of the fact that in this highly Christian country sanitary law is in such a state that months after a most unsatisfactory report on the state of a house a child may die in it unattended by any medical man, be found dead in bed with another living child, two others ill crouching at the fire, all affected with scarlet fever, and the three be removed to the workhouse by a relieving officer in an open butcher's cart with twenty-three degrees of frost in the air. He would be further interested to learn that they were then received into a reception ward in which the tea and the barley-water both froze in the morning, and that they were allowed to remain unseen by the medical man for three days for want of a special message from the master. The whole story is most distress-

ing. Although we cannot acquit the medical man of responsibility, we think it is very much qualified by his intimation to the master that unless there was some urgent necessity he would be unable to pay his usual visit on the Monday. The Local Government Board, in their distribution of censure, have properly not omitted to censure the Board of Guardians for allowing Francis's cottage to be inhabited after the bad reports made to them by their officer, and they should have added a special censure for having no better means of conveying scarlet fever cases than a butcher's open cart.

THE INTERNATIONAL MEDICAL AND SANITARY EXHIBITION.

THE extent of the forthcoming Exhibition shows a tendency to grow steadily, and the proportions which it bids fair to assume will not be far short of those minor International Exhibitions which followed the great show of 1862. The Horticultural Society have placed the whole of the arcades of their garden, which will accommodate a continuous line of exhibits over 2000 feet in extent, at the disposal of the Executive Committee. The Science and Art Department have given up about 200 feet of the Western Picture Gallery, which will serve as an excellent place for the exhibition of microscopes, surgical instruments, and other kinds of delicate apparatus. In addition there are four rooms under the Albert Hall which will be devoted to exhibition purposes, and one of which it is proposed to fit up as a hospital ward, to contain every variety of bed and ward appliance. Besides the space already mentioned there are the glazed quadrant arcades, so that the total space at the disposal of the Exhibition Committee will be not far short of 3000 feet of frontage. This ample amount of space will ensure to every exhibitor a good place for the display of articles, and there is no fear that any will be at serious disadvantage in this respect. The Committee have received over 400 applications for space, but they are still, we believe, ready to receive further applications. The galleries of the Western Picture Gallery will afford a great amount of additional wall space, and it is hoped that the authorities in the various watering-places and health resorts will take advantage of this for displaying pictures, &c., illustrative of the localities in which they are interested.

CADAVERIC ALKALOIDS.

MM. BROUARDEL and BOUTMY have communicated to the Académie des Sciences some further observations on the alkaloids developed in the animal body during decomposition —alkaloids which M. Selmi has termed *ptomaines*. According to Bouley and Lussana these substances may be developed not only after death but during life. It is still uncertain whether they are formed by simple chemical action or by the influence of minute organisms. The latter appear concurrently, but they may possibly be merely an indication that these alkaloids furnish a favourable soil for the development of this or that organism. The special object of M. Brouardel's researches was the discovery of means by which these substances may be distinguished from vegetable alkaloids. It is probable that the two have been sometimes confounded, and that this confusion has led to grave errors in medico-legal investigations. It was so in a recent case in Italy, where an expert believed that he had discovered, in the body of a deceased General, evidence of delphinine; the reactions supposed to be proof of it were, however, certainly due to one of these cadaveric alkaloids. The most effective method of distinguishing between the vegetable and the animal alkaloids is by making a complete examination of the chemical and physiological properties of the suspected substance; and if any one of these proper to a vegetable alkaloid is absent, it is probable that the substance is not this alkaloid, but a ptomaine which resembles it. This method is, however, tedious and difficult, and is only practicable when a considerable quantity of the suspected material is available. A more convenient method of distinguishing them is by the employment of ferricyanide of potassium. This substance is unaffected by the pure organic bases of the laboratory, or those extracted from the body of a person who is known to have been poisoned. The cadaveric alkaloids, however, instantly transform it into ferricyanide, and it becomes capable of forming prussian blue with salts of iron. The iodomercurate of potash gives similar reactions with both classes of substances, but the ferricyanide enables them to be distinguished. A few drops of a solution of the sulphate of the alkaloid are added to a solution of some of this salt in a watch-glass, and then a drop of a neutral solution of iron determines the formation of prussian blue if the base is a ptomaine, and not if it is a vegetable alkaloid. Unfortunately there are two important exceptions to this test: morphia produces a similar effect; and so also does veratrine, but in a much less degree.

RESULTS OF THE RECENT CENSUS.

IT is difficult to restrain a feeling of impatience for the issue of an official instalment of some of the results of the recent census. For weeks past the papers have teemed with paragraphs containing census figures of local origin, a large proportion of which is probably trustworthy within certain limits, while so many have been obviously misleading, as regards towns, on account of the numerous and conflicting boundaries used for municipal, parliamentary, or other purposes, that it is dangerous to formulate any conclusions on such information. Following previous precedent we may expect a preliminary census report, giving the unrevised figures for the whole of England and Wales, before the end of June. There will be no reasonable ground for complaint at this delay in the preparation of a return relating to a population little short of 26,000,000 of persons. In the meantime, however, there is a manifest inconvenience in having to wait so long for even the unrevised populations of the twenty large English towns dealt with in the Registrar-General's Weekly Return. It is noted in the last of these returns that new estimates of population, based upon the recently enumerated numbers, will shortly be substituted for the estimates still in use, which are mainly calculated upon the rate of increase that prevailed in the several towns during the decade 1861–70. It is at least undesirable that the Registrar-General should any longer continue to publish in his Weekly Return population estimates which have been proved erroneous, and rates of mortality based upon those estimates which differ widely from those supplied by local medical officers of health, who have now substituted the enumerated numbers for the incorrect estimates. Assuming the approximate accuracy of many of the population numbers locally issued, it appears certain that the population of most of our large towns was considerably over-estimated by the Registrar-General's method; in other words, the rate of increase of population in the last decade has been generally smaller than in the preceding decade. Especially were the populations of Leicester, Manchester, Salford, Bradford, and Sheffield over-estimated. These over-estimates are still used in the Registrar-General's Weekly Return, and the rates of mortality in several of the towns are thus understated to the extent of more than 2 per 1000. It may be hoped that this anomaly will soon disappear. If the locally published figures are to be trusted, the population of the city of Manchester actually declined to the extent of nearly 10,000, or about 3 per cent., during the last decade; this decrease,

however, was to a great extent balanced by an increase of more than 50,000, or 41 per cent., in Salford, and by a still larger increase in other directions outside the municipal boundaries of the city.

AN INTELLIGENT JURY.

A CASE which lately came before Mr. H. C. Yates, the coroner for Sandbach, is rightly stigmatised by the local journals as "extraordinary," albeit that the facts are of a very ordinary kind. On the night of April 9th a Mrs. Froggatt, aged eighty-two, having been undressed by her servant in the presence of the servant's little daughter, bolted her bedroom door on the inside and retired to bed. The next morning she did not ring as usual, and when called failed to answer. The servant, in the presence of her daughter and another woman, then broke in a panel of the door, drew back the bolt, entered the room, and found Mrs. Froggatt dead. The medical man who was called in testified, in effect, that deceased had probably been convulsed at the moment of death, and searching for the cause he had found a set of twelve false teeth, which she had forgotten to remove when she went to bed, jammed into the lower part of the pharynx, and obstructing the larynx. The medical opinion was that death had resulted from suffocation due to the impaction of the false teeth. Notwithstanding this a post-mortem examination was ordered, and a medical gentleman other than the one who was called to the deceased was requested to make it. The post-mortem afforded evidence of death from suffocation, and an analysis of the contents of the stomach showed that it did not contain any poison. Not a particle of the evidence given at the inquest was contradicted, and to all ordinary minds the cause of death must have seemed certain. The coroner's jury, however, "dreat in a little brief authority," thought fit to return the following verdict after a deliberation of half an hour's duration:—"That the deceased died from suffocation, but that there has not been sufficient evidence brought before them to show how such suffocation was caused. The jury wish to add that they consider Dr. Davies was guilty of an error in judgment in having taken the teeth from the deceased's throat without proper authority"! A coroner's jury seldom returns such a fantastic verdict as that arrived at by the twelve good men and true of Sandbach. We would point out, however, that the only logical sequence of such a verdict in the face of such apparently conclusive evidence would be a prosecution of all the witnesses for perjury.

AN AUTOMATIC THERMOMETER.

ACCORDING to an announcement of the *Scientific American*, clinical thermometry is to be very much simplified. Automatic registration has been long employed with success in many meteorological investigations, and also in the physiological laboratory, but scarcely at all in clinical work. Dr. Adams of Colorado Springs has, however, invented a "thermograph," which is said to be capable of registering the variations of the temperature of the human body. The apparatus appears from the description to be not a little complex both in principle and in construction. First the heat is transformed into motion, the motion into electrical resistance, and the electricity is transformed, *viâ* magnetism, into registrable motion, the variations in which are thus indications of the variations in the electrical resistance, and therefore of the initial heat. The essential principle is that of using the variations in electrical resistance as the indications of a variation in another form of force—a further application of the pregnant discoveries of which the microphone was the first-fruits. Dr. Adams's instrument is said to consist first of a metallic thermometer—a spiral spring made of two springs of brass and steel, on the principle of the compensatory balance-wheel of a watch. The effect of a slight elevation of temperature is to cause the spring to twist, and a knob at its extremity to compress a powder made of plumbago, gas-carbon, and silver, which is contained within a vulcanite tube. Through this powder the electrical current is passed, and the variations in its force, which depend upon the varying compression of the powder, affect an ingenious electro-magnetic mechanism which traces a line on a moving surface, and the curves thus traced indicate the variations in the temperature of the body.

THE CRÈCHE.

EVERY now and again we hear of a paucity of useful work for women. It is essentially woman's work to nurse babies, and those who are not *above* such feminine service may do incalculable good by establishing crèches for the safe and kindly custody of the children of the labouring poor while their mothers are engaged in their daily duties as bread-winners. We note with satisfaction that this laudable enterprise is extending, and that it is beginning to receive the support it deserves, alike from women of the wealthier classes and those for whose aid and convenience it has been inaugurated. The sufferings of infants which are either dragged or tossed about by their mothers during a hard day's toil, or left in the charge of children too young, and physically unable, to take proper care of them, are terrible and needless. Many are crippled for life, or contract incurable diseases, under this neglect or mismanagement. The crèche is a home where mothers of the working classes can leave their babies on their way to work, and fetch them at night. The benevolent persons maintaining establishments of this description provide proper nurses and appliances for the care of the infants so deposited during the day. A small fee is charged, and this deprives the institution of a charitable character, which would prove ruinous to the prospect of success. We feel, and urge, the duty of supporting these crèches by every means in our power.

DR. BORLAND OF KILMARNOCK.

FIFTY years of medical work in and about Kilmarnock were crowned and celebrated on the 29th of April most worthily. The inhabitants assembled at a good old-fashioned Scotch supper, and made sure of the presence of Dr. Borland, the hero of the occasion. The chair was most ably and gracefully filled by Provost Sturrock, and, after supper, began such a flow of good feeling and good speech as has not often been exceeded. We do not use the words of form when we express our regret that we cannot find room for the eloquent speeches, especially those of the Provost and of Dr. Borland. The remarks of the former were backed by the presentation to Dr. Borland of £500, and a silver salver, with the following inscription: "Presented to John Borland, M.D., with a cheque for £500, and a gold brooch for Mrs. Borland, on the occasion of his jubilee, as a medical practitioner in Kilmarnock, in recognition of the invaluable services rendered to his native town during the past half century.—Kilmarnock, April 29th, 1881."

BRIGHT'S DISEASE AT BERBICE.

DR. GRIEVE, the medical superintendent of the Berbice lunatic asylum, publishes a journal composed and printed at the asylum, which among other matters contains an article on the prevalence of Bright's disease in the colony as indicated by the asylum records. It would appear from the latest 100 cadaveric sections made in the asylum that advanced degeneration of the kidneys sufficient to account for death, or disease in a less advanced stage, but still distinct and un-

mistakable, was seen in 86 cases, whilst only in 14 bodies were the kidneys found to be free from this change, so that 80 per cent. of those who died and whose bodies were examined had been subject to Bright's disease. It is noted that this great extension of the malady is not confined to the asylum, because a few years ago Dr. Hackett undertook an examination of the urine of every patient under treatment at the time in the Berbice Colonial Hospital, and found albumen in the urine of nearly 90 per cent. of the cases. It is suggested that the anæmia so frequently seen in the colony and much of the chronic diarrhœa are concomitants of Bright's disease; and, further, to the prevalence of this disease the high rate of mortality which obtains in the colony is due.

IRISH UNION HOSPITALS FOR PURPOSES OF CLINICAL STUDY.

THE following memorial raises an important question, and directs attention to a great field of hospital study, which has not been sufficiently regarded either in Ireland or elsewhere. It is too readily concluded that the clinical study of disease is only to be carried on in hospitals formally attached to medical schools. We may revert shortly to this subject. Meantime we place the memorial on record as creditable to the physicians and surgeons of the union hospitals of Ireland.

"*Memorial of the undersigned Physicians and Surgeons to Union Hospitals to the Senate of the Royal University, respectfully sheweth,—*

"That clinical or bedside training is universally admitted to be of the first importance in the education of medical students. That a mere fraction of the resources available for such instruction is now at the disposal of such students. That during the year 1877, 111,134 patients labouring under all forms of sickness were treated in these various union hospitals, which are provided with every possible requisite for the treatment of disease, while during the same time not more than 16,000 patients were treated in those hospitals of Dublin, Belfast, Cork, and Galway, which have between them the monopoly of clinical instruction. That no system of concursus regulates the appointments to the medical staffs of those clinical hospitals in the four towns last referred to, and that no ground therefore exists for alleging such a difference in the attainments of the respective staffs as would furnish a plea for excluding provincial men from all share in clinical teaching. That the results of the present system of monopoly are such as might have been anticipated, and that the serious attention of the General Medical Council was long ago directed to those glaring defects in the practical training of medical students. That in the year 1877, chiefly at the instance of Sir James Paget, the Council resolved to recommend that one year of the medical curriculum should be spent by each student at a union or other provincial hospital. That local interests and the deficient powers of that Council have heretofore prevented this enlightened recommendation being given effect to. That having every confidence that your body will not allow such mere local interests to any longer oppose obstacles, and looking with every confidence to your University placing itself in the van of progress, the undersigned respectfully memorialise you to enforce this recommendation of the governing body of the medical profession."

VOLUNTEER SURGEONS.

WE observe with satisfaction that Mr. Childers has announced his intention of putting the Surgeons of Volunteer Corps on the same footing with regard to retirement as Militia Surgeons not on the departmental list. They will be entitled to retain their rank on retirement after fifteen years' service, and after twenty years' service will receive a step of honorary rank if duly recommended for it.

CHARLES MURCHISON MEMORIAL CLINICAL SCHOLARSHIP.

THE legal deed in connexion with this memorial is now being considered by the University of Edinburgh and the Royal College of Physicians of London, the two bodies with whom will rest, alternately, the award of this Scholarship. Another anonymous donation of £100 has been sent through Mr. T. H. Hills, and this, with some recent subscriptions, the balance of the St. Thomas's Hospital Fund (for the bust), and the interest on deposit account, brings up the total amount, after payment of expenses, to the sum of £1000. When the trust deed is completed this money will be handed over to the College of Physicians. It is hoped that the first award of the Scholarship may take place in London in April, 1882.

BOARDS OF GUARDIANS are, it is well known, not always just, and but seldom indeed generous, in their treatment of union medical officers. It is therefore with the more satisfaction that we note a graceful act on the part of the guardians of Holbeach—one the publication of which may, let us hope, quicken in other parochial authorities the sense of appreciation of the services of gentlemen whom they appoint to watch over the medical interests of the poor. Recently a young woman was received into the Holbeach workhouse infirmary suffering from an ovarian tumour. This was successfully removed by Mr. Harper, the medical officer; and the extra anxiety and attention necessarily entailed by the treatment of this case, as compared with those constituting the ordinary work of the infirmary, have been acknowledged by the guardians by the award to Mr. Harper of a fee of ten guineas.

THE BUILDER, in an article entitled "Traits of the Earl of Beaconsfield," recalls the fact that when Mr. Disraeli delivered his maiden speech in the House of Commons, "Thomas Wakley, the popular and eloquent member for Finsbury, of that time, remarked to me a day or two afterwards, in respect to it, 'That young man told us that we should listen to him some day—and I fully believe it—and that the country will do so also.'" This is strictly true. The same expression of opinion was made to Sir Robert Peel.

MR. A. B. JAY, the sculptor to whom was entrusted the modeling of the statue of Harvey, which is to be unveiled at Folkestone in August next, will be pleased to exhibit that statue, and one of Mr. Gladstone, which he has recently completed for the East-end of London, to members of the medical profession, upon presentation of their cards at the Studio, No. 8, the Avenue, 76, Fulham-road, South Kensington, on Tuesday or Wednesday next, the 24th and 25th instant.

MR. E. H. BENNETT, Professor of Surgery in the University of Dublin; Mr. Baker; and Mr. Meldon, Surgeon to Jervis-street Hospital, are candidates for a seat on the Council of the Royal College of Surgeons in Ireland.

AT the meeting of the Royal College of Physicians on the 16th inst., Dr. Burdon Sanderson was appointed Baly Medalist for 1881.

DR. ALLEN THOMSON has been elected one of the trustees of the Hunterian collection of the Royal College of Surgeons, in the place of the late Dr. Sharpey.

DR. BARCLAY will deliver the Harveian Oration at the Royal College of Physicians on Saturday, June 18th.

WE gladly direct attention to the morning performance to be given at the Gaiety Theatre on Monday, the 30th inst., in aid of the funds of the Hospital for Hip Disease in Children, Queen-square and Bournemouth. The programme of the entertainment is of an attractive character, and the result, we trust, will be a large accession to the resources of an institution the value of which to the poor little sufferers from morbus coxæ is almost incalculable.

DRS. J. T. BANKS, Peter Redfern, F. R. Cruise, W. A. M'Keown, and A. Macalister have been appointed to seats on the Senate of the Royal University of Ireland.

THE Society of Medical Practitioners of St. Petersburg, at their meeting of May 2nd, decided to admit medical women to the membership of the Society.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Derby (Urban).—Mr. Iliffe reports for this borough during 1880, among an estimated population of 80,385, a birth-rate of 37·9 per 1000 inhabitants, and a death-rate of 20·0. But the sanitary condition of Derby does not appear to be so good as might have been anticipated in so important a town, as Mr. Iliffe finds it necessary to draw the attention of the Sanitary Authority *again* to the necessity of the removal of cesspools in crowded areas, and to the desirability of paving courts and alleys, which in many places, he says, are in a disgraceful state and positively injurious to health by allowing filth to accumulate on the surface of the ground without the means of being disposed of except by exhalation and soakage into the subsoil. The most interesting part of the report is the account given of a year's working of the Derby Improvement Act, 1879, which imposes a compulsory notification of infectious diseases to the Sanitary Authority upon the inhabitants of the borough. Mr. Iliffe believes that this provision, which on the whole appears to have been carried out without serious opposition, has materially contributed towards diminishing the number of illnesses, as well as the number of deaths from fever, &c. It has certainly been of practical value to him, he says, "in bringing to light many insanitary conditions existing in houses and areas, which otherwise might have been overlooked until further disease and death had taken place; and it has enabled him to prevent the spread of infection in many localities by adopting means of isolation, disinfection, &c., and also by keeping children likely to spread disease from attending school and other public resorts, a danger that was formerly only too common. It has been the cause of affording your medical officer the means of frequently tracing the cause of disease, and the origin of the various attacks, and it may be that in the future it may contribute materially towards saving the town from widespread epidemics." The action of the medical officer and his staff upon the information received from this compulsory notification appears to have been received by the people affected by it, as a rule, with "thankfulness and gratitude," and no opposition was experienced from the general public. The cases of infectious disease notified under the compulsory notification clauses of the Improvement Act were 1295, the greater number being measles. Derby is deficient in sanitary hospital accommodation; had it been otherwise, Mr. Iliffe would, doubtless, have been able to report still more favourably of the beneficial operation of the clauses.

Newbiggin-by-Sea, Urban (Northumberland).—Dr. J. C. Reid, assuming that the population has been virtually stationary since 1871, gives the death-rate of this urban district in 1880 as 18·96. He writes favourably of the health condition of the town during that year, and expresses a hope that the annual rate of mortality will be reduced to 15·0 per 1000 population, which, he holds, would be the normal mortality of the place.

Wareham and Isle of Purbeck, Urban (Dorchester).—Dr. W. W. Stainthorpe reports for this sanitary district, during 1880, a death-rate of 14·2 per 1000 population. He describes in detail his proceedings in the execution of his duties, and suggests, in view of the frequency with which the medical man is not called in in illness, the formation of medical clubs among the labouring classes after the manner of the Suffolk County Medical Club, by means of which a labouring man would be able to obtain the services of a doctor for himself, his wife, and family for a small annual sum. He would have it a rule of such clubs that notice should be given at once to the medical officer of health of the occurrence of a case of infectious disease.

Bingham, Rural (Notts).—Mr. T. Poyntz Wright reports for this sanitary district in 1880 a birth-rate of 30·54 per 1000 of the population, and a death-rate of 19·91. The water-supply of the district is not entirely satisfactory; the geological character of the locality being such as to render the water so hard and so loaded with mineral matter as to make it unfit for domestic consumption. Mr. Wright refers to several instances in which this difficulty has been successfully overcome by providing soft-water cisterns for houses. Alluding to the occurrence of typhoid fever in the district, Mr. Wright observes that in nearly every instance the disease has been produced by water which has become contaminated. The infant mortality of the district is in excess of what it should be, and Mr. Wright has some interesting remarks upon the relations of this mortality to the impoverished condition of the labouring classes during periods of agricultural depression, to bad and insufficient clothing and feeding of the children, and to general maternal neglect.

Stretford, Urban (Lancashire).—Mr. G. W. Pettinger reports for this district in 1880 a birth-rate of 27·25 per 1000 of the population (20,000), and a death-rate of 16·95. The prevalence of diarrhœa in August and September appears to have been the most noticeable fact of the health history of the year, and led to much limewashing and disinfection of privies. Mr. Pettinger thinks that "great heat and improper feeding, with a large number of delicate and atrophied children, are the chief causes of so great a mortality in that season of the year." The sanitary condition of the district is said to be much improved, and it would appear that old privies are being converted into new ones on better principles.

Greenock.—Dr. Wallace reports for the five weeks ending April 2nd a total mortality in that town at an annual rate of 18·4 per 1000 of the population. The most noticeable features in the disease history of the period were the diminution of cases of measles and the continuance of typhus. The cases of typhus embraced eleven distinct households, and had, in the majority of instances, a connexion with one another, or with cases formerly reported on.

Weston-super-Mare, Urban (Somersetshire).—Mr. C. Vernon Hitchins gives a very favourable report of this district for the past quarter. The total mortality was at the low annual rate of 12·7 per 1000 of the population, and no death was registered from any zymotic disease.

Huddersfield, Urban.—Dr. Cameron reports for this borough during the five weeks ending April 2nd, births equal to a yearly rate of 32·09 per 1000 inhabitants, and deaths equal to a yearly rate of 20·68. The sickness reported to the sanitary authority under the local Act in force in the borough is generally stated to have been "fever," and to have chiefly consisted of cases of scarlatina of a mild type. No return is given of cases treated in the sanitary hospital.

THE METROPOLITAN ASYLUMS BOARD AND THE LOCAL GOVERNMENT BOARD.

At a recent meeting of the Metropolitan Asylums Board the following resolution was adopted:—"That, in consideration of the alarming and continued increase of the epidemic of small-pox in the metropolis, and having regard to the recent decision of the House of Lords (in the case of 'Hill *v.* the Metropolitan Asylums Board'), a decision which has completely fettered the action of the managers, the Local Government Board be urged that immediate legislation is necessary, and that a Bill should at once be introduced into Parliament to define, and, if necessary, to enlarge, the powers of the Metropolitan Asylums Board and the several local authorities, to enable them to deal with epidemic disease in a successful and satisfactory manner, without molestation, and to discharge the duties which the Act of 1867 imposed upon them." That the Asylums Board

should find itself compelled to take this course sufficiently indicates the anomalous nature of its relations with the Central Board. Hitherto it has been obviously a case of the blind leading the blind, and now it appears that the led are called upon to advise the leaders as to their leading. But it is not the law as to the metropolis which alone requires reconsideration as to the matters to which the resolution refers, but the general Public Health Law on the subject. The local authorities in the provinces are scarcely less subject to discomforts in respect to infectious disease hospital accommodation than the local authorities in the metropolis, and from similar defects in the Public Health Law. Until these discomforts and disabilities are swept away it is idle to expect that these special hospitals will be promoted to the extent that is desired in the interests of the kingdom.

Our readers will probably remember that the Lower Thames Joint Sewerage Board disputed an account of Dr. Collum, of Kingston, which amounted to £31 10s., fees charged for services to the Board, and offered him £5 5s. in discharge of the claim. Dr. Collum refused to accept this, and proceeded against the Board in the County Court for the sum originally charged. The case was recently heard before the Judge of the Court, Vernon Lushington, Esq., Q.C. It appeared that meanwhile the joint Board had paid into the Court £15 15s. in satisfaction of the claim. The learned Judge, however, granted the original amount claimed by Dr. Collum, and commented somewhat strongly on the pettiness of the action taken by the joint Board.

Mr. Dodson, asked in the House of Commons by Mr. Hopwood, in reference to some proceedings of Dr. Stevens respecting the vaccination of infants in workhouses, had no hesitation in throwing over, after a fashion, his medical superintendent of vaccination arrangements, the circular of his own department respecting the importance of these workhouse vaccinations, and the law as it had been acted upon by his predecessors. Persons might have thought the question of vaccination a sufficiently difficult one in public administration at the present time, without its difficulties being augmented by the Minister who is responsible for the administration!

A curious case is reported from the Croydon Police Court. A woman was brought before the magistrate, charged with having absconded from the workhouse infirmary, Duppashill. She had been engaged in attending as a nurse upon cases of small-pox up to the day but one before, when she had first been sent into the general wards of the infirmary, and afterwards exposed among many persons in the police-station. The magistrate held that the exposure had been monstrous, directed the nurse to leave the Court, and the witnesses against her, and ordered inquiry to be made into the matter, but cautiously delegated the inquiry to other persons.

Mr. Wynter Blyth's number of his "Sanitary Chronicles for the Parish of St. Marylebone," containing his report for the quarter ending March 31st, commences with the peculiarity of limiting the account of the meteorology of the quarter to the month of March only. He introduces, moreover, certain "epidemic forecasts" relating to small-pox, for which he asks the same kindly consideration as has been given to weather forecasts. He discusses, also, "oleo-margarine or butterine," and gives some directions (with illustrations) to enable the ordinary observer to ascertain whether he is dealing with butterine or butter.

Barking is considering the propriety of forming itself into a Local Board, but not before it is time, according to the statement of a speaker at the public meeting called to consider the question, and who said that there was no responsible authority in the town to look after the interests of the ratepayers, and to carry out the improvements which from time to time were necessary to prevent houses from being "tucked up" in back gardens without regard to decency and order, and from being infamously constructed, and without proper sanitary arrangements.

A curious vaccination scare was created in the neighbourhood of Dudley a few days ago, where a rumour was spread that the children in the Board Schools were going to be vaccinated by "three American black doctors." The mothers took the alarm and flocked to the schools armed with various ready missiles, and in a few instances windows were broken before the excited women could be convinced that they had been made the victims of a hoax.

Dr. Orme Dudfield's report on the health of Kensington for the four weeks ending April 23rd has interesting details of the occurrences of small-pox and other matters in the parish during the period, as well as of further proceedings relating to small-pox accommodation, which appear to have been substantially adopted by the Metropolitan Asylums Board; also a brief statement of the result of the late deputation from the metropolitan vestries and other bodies on the compulsory notification of infectious diseases &c. to the President of the Local Government Board.

The Thames River Bill (No. 2), brought into the House of Commons by Mr. Chamberlain and Mr. Ashby, although chiefly devoted to the abolition of compulsory pilotage and the free navigation of the river above Gravesend, and the better regulation of the traffic thereon (particularly with regard to the use of steam launches in the upper reaches), contains also provisions for successive owners and occupiers to be affected by notice as to flow of sewage, and for power to inspect lands &c. in relation to sewage &c.

A woman was committed for trial by the sitting magistrate at Hammersmith a few days ago for having given a false address on registering the birth of a child, the object being to conceal it from the vaccination officer. The death of the child, when the real place of residence was registered, led to the discovery of the fraud.

The relieving officer of Islington has proceeded in the Queen's Bench Division of the High Court of Justice against one of the district medical officers for libel in certain somewhat free comments which the medical officer had expressed upon his conduct in the pursuit of his duties. Judgment was given for the defendant, with costs.

Attempts on the part of the sanitary authorities of Fulham, Kensington, and Woolwich, to provide temporary hospital accommodation for cases of small-pox, have each been met with great local public opposition; and in the case of Fulham, the opposition has been carried into the courts of law.

The City of London has determined to use its port hospital ship *Rhin*, at Gravesend, for the isolation of convalescent cases of small-pox from the City, but it is not explained how exigencies on board ships entering the Thames during this use of the hospital ship are to be met.

Glasgow has received the contagion of small-pox from a body of emigrants who had passed by way of Leith through Edinburgh. Both cities are much perturbed by the untoward event.

Three members of the Aberdeen School Board were unable to attend a recent meeting from sickness caused by the so-called milk epidemic in the city.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

English urban mortality continues satisfactorily low. In twenty of the largest English towns, estimated to contain in the middle of this year nearly a third of the entire population of England and Wales, 5330 births and 2944 deaths were registered last week. The births exceeded by 144, while the deaths were so many as 313 below, the average weekly numbers during 1880. The annual rate of mortality in the twenty towns, which had steadily declined in the four preceding weeks from 22·9 to 20·1, was equal to 20·2 last week. The lowest rates in the twenty towns last week were 14·5 in Plymouth, 15·6 in Bristol, 15·8 in Brighton, and 16·9 in Norwich. The rates in the other towns ranged upwards to 22·8 in Manchester, 23·7 in Newcastle-upon-Tyne, 24·0 in Oldham, and 26·5 in Wolverhampton. During the first six weeks of the current quarter the death-rate in the twenty towns averaged 21·5 per 1000, against 24·0, the average rate in the corresponding periods of the five years 1876–80.

The deaths referred to the principal zymotic diseases in the twenty towns, which had been 374 and 410 in the two previous weeks, were 396 last week; these included 114 from measles, 74 from whooping-cough, 70 from small-pox, 55 from scarlet fever, 32 from diarrhœa, 27 from fever (principally enteric), and 24 from diphtheria. The annual death-rate from these principal zymotic diseases averaged

2·7 per 1000 in the twenty towns, and ranged from 0·0 both in Brighton and Plymouth, to 3·2 in Sheffield, 3·4 in London, and 3·5 in Oldham. Measles showed the largest proportional fatality in Bristol and Sheffield, and scarlet fever in Salford. The highest death-rates from "fever" were recorded in Liverpool and Oldham. The 24 deaths referred to diphtheria in the twenty towns included 16 in London and 4 in Portsmouth. Small-pox caused 77 more deaths in London and its outer ring of suburban districts, and 1 in Liverpool, whereas no fatal case of this disease was recorded in any of the eighteen other large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 942 and 1093 at the end of the two preceding weeks, further rose last week to 1225 on Saturday last, of whom 131 were convalescents temporarily accommodated in tents at Darenth. The new cases admitted to these hospitals further rose to 379 last week, from 178 and 363 in the two previous weeks. The Highgate Small-pox Hospital contained 86 patients on Saturday last, and 23 new cases were admitted during the week.

The deaths referred to diseases of the respiratory organs in London, which had steadily declined from 395 to 297 in the four preceding weeks, further fell to 254 last week, and were 38 below the corrected average number in the corresponding week of the last ten years; they included 146 from bronchitis and 87 from pneumonia. The annual death-rate from lung diseases, exclusive of phthisis, was equal to 3·5 per 1000 in London last week; while the rate from the same diseases was equal to 5·7 in Liverpool.

The causes of 51, or 1·7 per cent., of the deaths in the twenty towns last week were not certified either by a registered medical practitioner or by a coroner. The proportion of uncertified deaths did not exceed 1·1 per cent. in London, whereas it averaged 2·3 in the nineteen provincial towns. No uncertified deaths were registered last week in Portsmouth, Plymouth, Nottingham, Salford, Sunderland, or Newcastle-upon-Tyne; while the proportions of such deaths were largest in Sheffield and Wolverhampton.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a half persons, the annual death-rate last week was equal to 20·6 per 1000, against 21·2 and 21·4 in the two preceding weeks; this rate exceeded the average rate prevailing in the twenty English towns by but 0·4. The rates in the eight Scotch towns ranged from 13·3 and 16·6 in Greenock and Dundee, to 22·2 and 31·8 in Glasgow and Paisley. It is noted that the rate in Paisley is probably over-stated by an underestimate of its present population. The deaths referred to the principal zymotic diseases in the eight towns, which had been 64 in each of the two preceding weeks, rose to 82 last week; they included 24 from whooping-cough, 20 from diarrhœa, 12 from "fever," 12 from scarlet fever, 7 from diphtheria, 7 from measles, and not 1 from small-pox. The annual death-rate from these zymotic diseases averaged 3·2 per 1000 in the eight towns, and exceeded the average rate from the same diseases in the twenty English towns by 0·5. This zymotic rate in the eight Scotch towns ranged from 0·0 and 1·5 in Perth and Aberdeen, to 3·8 and 5·2 in Edinburgh and Leith. The 24 fatal cases of whooping-cough showed an increase of 13 upon the number returned in the previous week; 13 occurred in Glasgow, 4 in Edinburgh, and 3 in Leith. The 20 deaths referred to diarrhœa showed a further increase upon recent weekly numbers, and were proportionally more numerous than those attributed to the same cause in the English towns. The 12 deaths from "fever" (including typhus, enteric, and simple continued) corresponded with the number in the previous week, and included 6 in Glasgow and 2 in Edinburgh; the annual death-rate from this cause was equal to 0·48 per 1000, and was nearly three times the average rate from fever in the twenty English towns. The 12 fatal cases of scarlet fever showed a further increase upon the numbers in recent weeks; no less than 8 were returned in Edinburgh and 4 in Glasgow. All the 7 deaths from measles were returned in Glasgow; and the 7 deaths from diphtheria included 4 in Glasgow, 2 in Edinburgh, and 1 in Paisley. The deaths referred to acute diseases of the lungs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 116 and 140 in the two preceding weeks, declined to 111 last week, and were equal to an annual rate of 4·4 per 1000, while the rate from the same diseases in London did not exceed 3·4.

HEALTH OF DUBLIN.

The rate of mortality in Dublin showed an increase again last week. The annual death-rate in the city, which had been equal to 32·6, 30·7, and 27·5 per 1000 in the three preceding weeks, rose again to 29·9 last week. During the first six weeks of the current quarter the death-rate in the city averaged 30·1 per 1000, against 21·6 in London and 21·1 in Edinburgh. The 191 deaths in Dublin last week showed an increase of 15 upon the number in the previous week, and included 14, or rather more than 7 per cent., which were referred to the principal zymotic diseases, against 19 and 8 in the two previous weeks. These 14 deaths from zymotic diseases included 8 from fever (typhus, enteric, or simple), 3 from whooping-cough, one each from scarlet fever, diphtheria, and diarrhœa, and not one either from small-pox or measles. The annual death-rate from these zymotic diseases was equal to 2·2 per 1000, while the rate from the same causes was 3·4 in London and 3·8 in Edinburgh. The deaths referred to fever in Dublin, which had been 14 and 3 in the two preceding weeks, rose again to 8 last week, and were equal to an annual rate more than six times as high as the average rate from the same cause in the twenty large English towns. The 3 deaths from whooping-cough showed an increase upon recent weekly numbers; while the fatal cases of the other principal zymotic diseases were again satisfactorily few. The deaths both of infants and of elderly persons showed a further decline from the numbers returned in recent weeks; the increase of mortality in the city, therefore, must have occurred among children and adults aged between one and sixty years.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

THE PLAGUE.

The latest news received from Turkey in Asia as to plague appears to show that the disease has not extended beyond the area of the somewhat circumscribed district in which it first appeared, and that within this area it has ceased to prevail everywhere, except in the sacred city of Nedjef. The accounts of the progress of the disease to the present are still so incomplete that a connected history cannot well be written, but it would seem that at no time since the reappearance of the disease in this region in 1867 has the malady shown itself in a graver form. The destructive character of the scourge is stated to have been very great in the different villages and among the several nomadic tribes which have been affected by it. Nedjef particularly seems to have suffered much. This important place, although it has more than once been infected by plague in the outbreaks within the period 1872–1877, yet on each of the several times the disease appeared within its walls had but a small number of cases among its population, and but few lives were lost. But on the present occasion the loss of life appears to have been very great, and the infection is reported to be still continuing its ravages without any diminution of its virulence. As one of the two most important burial-places and centres of pilgrimage of the Shiite Mahommedans from Persia (the neighbouring city of Kerbela being the other city here referred to), the occurrence of serious plague in Nedjef is looked upon with the greatest uneasiness by the Ottoman sanitary authorities. To Nedjef and Kerbela are carried annually thousands of bodies from Persia in all stages of decomposition for burial in the sacred soil beneath and under the shelter of the two cities, and the old notion of the connexion of plague with a soil too much encumbered with the dead has again been broached with reference to the prevalences of the disease in this part of Mesopotamia—a notion which simply shows how carelessly the history of the recent prevalences of plague in Mesopotamia has been read by the responsible sanitary authorities. The infected localities have been surrounded by double and even triple sanitary cordons of troops, and the Ottoman sanitary authorities, aided by the nomadic Arab tribes, believe they have succeeded in shutting off the localities from the outer world. But in all the accounts which are given of these measures of quarantine, of which system the cordons form a part, not a word is said of any attempt to deal fundamentally with those local conditions of the marsh villages on the Euphrates, which Surgeon-Major Colvill and others showed were so closely connected with the appearance and develop-

ment of plague. It does not seem even to be understood that the successive reappearances of plague in this part of Mesopotamia make this persistent recurrence to arbitrary measures of quarantine a wholly farcical proceeding, as unjustifiable as unreasoning—measures which even the persons instituting or claiming them recognise as not to be trusted in the least degree. Notwithstanding the extraordinary stringency of the quarantine measures said to be put in force by the Ottoman Government against the plague-infected districts in Mesopotamia, we cannot learn that a single quarantine power on the Mediterranean or Black Sea littoral has modified its own quarantine restrictions, but continues them as if the Ottoman restrictions did not exist.

FILTERING CAPACITY OF SOILS.

A supplement to No. 13 of the National Board of Health Bulletin, U.S., contains the first part of a report on a series of elaborate researches on the filtering capacity of soils, by Mr. Raphael Pumpelly, of great interest. This preliminary report is confined to the soils and some other substances, as filters, in eliminating living low vegetable organisms from air and fluids, but in this direction a beginning only is professed to have been made. Careful descriptions are given of the methods of research pursued, and already important indications of the value of the results to be obtained in determining the relation of soils to health are given. For example, in a section on filtering bacteria and their germs from liquids we have the following observations and conclusions: "From these results it appears very clearly that sand interposes absolutely no barrier between wells and the bacterial infection from cesspools, cemeteries, &c., lying, even at great distances, in the lower wet stratum of sand. And it appears probable that a dry gravel or possibly a dry very coarse sand interposes no barrier to the free entrance into houses built upon them of these organisms, which swarm in the ground-air around leaky cesspools, leaky drains, &c., or in the filthy made ground of cities;" and, further, it is concluded from the experiments, "That a house may be built on a thoroughly dry body of sand or gravel, and its cellar may be far above the level of the ground water at all times, and it may yet be in danger of having the air of its rooms contaminated by the germs from leaking cesspools and vaults; for if the drift of the leaking be towards the cellar, very wet seasons may extend the polluted moisture to the cellar walls, whence, after evaporation, the germs will pass into the atmospheric circulation of the house." The bulk of the report is chiefly occupied with the detailed results of air and liquid filtrations under different circumstances.

The Sanitary Assurance Association have published in a separate form the lecture recently delivered at the London Institution by Professor F. de Chaumont, F.R.S.; also the short addresses delivered after the conclusion of the lecture by Mr. Erichsen, F.R.S., President of the College of Surgeons, Sir Joseph Fayrer, K.C.S.I., M.D., F.R.S., and Mr. R. Brudenell Carter, F.R.C.S.

Russian journals state that a notice has been affixed in the Students' Hall in the University, inviting volunteers from medical students in their fifth year of study to proceed to the district of Ovroutch, province of Volhynia, to give assistance in dealing with a serious epidemic of small-pox prevailing there.

THE SERVICES.

THE VICTORIA CROSS.

Amongst the recipients of this much-coveted reward is Provisional Lance-Corporal Joseph John Farmer, of the Army Hospital Corps, "for conspicuous bravery during the engagement with the Boers at the Majuba Mountain, on the 27th February, 1881, when he showed a spirit of self-abnegation and an example of cool courage which cannot be too highly commended. While the Boers closed with the British troops near the wells, Corporal Farmer held a white flag over the wounded, and when the arm holding the flag was shot through, he called out that he had 'another.' He then raised the flag with the other arm, and continued to do so until that also was pierced with a bullet."

WAR OFFICE.—The Secretary of State for War has appointed William Walter Weld, Esq., Surgeon-Major, to be Visiting Surgeon at Colchester, under the Contagious Diseases Acts, 1866 to 1869, vice E. Waylen, Esq., deceased, from May 10th inclusively; and James Bell Jardine, Esq., M.D. Edin., L.R.C.S. Eng., to be Visiting Surgeon at Chatham, under the Contagious Diseases Acts, 1866 to 1869, vice W. W. Weld, Esq., appointed Visiting Surgeon at Colchester, from May 10th inclusively.

ARMY MEDICAL DEPARTMENT. — Brigade-Surgeon Wallace Haward has been granted retired pay, with the honorary rank of Deputy Surgeon-General; dated April 25th, 1881. Surgeon-Major John Harrison Robotham to be Brigade-Surgeon, vice E. L. Hiffernan, deceased; dated April 25th, 1881. Surgeon-Major Frederick Robert Wilson, M.B., has been granted retired pay, with the honorary rank of Brigade-Surgeon; dated April 17th, 1881. Surgeon-Major Henry Lamb is granted retired pay, with the honorary rank of Brigade-Surgeon; dated May 18th, 1881. Surgeon-Major Edward Nicholson has retired on temporary half-pay. Dated May 8th, 1881. Surgeon John Joseph Crean to be Surgeon-Major; dated May 1st, 1881.

MILITIA MEDICAL DEPARTMENT. — Surgeon Rowland Hill Coombe, Bedford Militia, to be Surgeon-Major.

ADMIRALTY. — The following appointments have been made: Staff-Surgeon Robert J. McMorris, to the *Malabar*, vice MacClinton; Staff-Surgeon John Buckley, to the *Téméraire*, vice Fennell; Staff-Surgeon John Mockridge, to the *Warrior*, vice Buckley; and George W. F. Armstrong, M.D., to the *Ruby*, vice Brunt.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

ON Tuesday afternoon a deputation from this Association had an interview with Mr. Dodson and Mr. Hibbert, at the office of the Local Government Board, for the purpose of urging the desirableness of making the superannuation of Poor-law medical officers compulsory, instead of permissive. The deputation was introduced by Sir Trevor Lawrence, M.P., president of the Association, and included Mr. Thorold Rogers, M.P.; Dr. Lyons, M.P.; Sir W. Palliser, M.P.; Dr. Rogers, chairman of the Council; Mr. Wickham Barnes, hon. secretary; Dr. Norman Kerr; Dr. Burchell; Dr. Elliott Porter, Lindfield, East Sussex; Mr. D. B. Balding, Royston; Dr. Whitwell, Shrewsbury; Dr. Fegan, Woolwich; E. Marshall, Esq., Mitcham; T. Walford, Esq., Reading; O. Lousley, Esq.; Dr. Walter Smith, London; — Bland, Esq., Isle of Sheppey; — Pardoe, Esq., London; Dr. Bain, London; Dr. Young, Aldershot; E. Child, Esq., New Malden; Dr. Smythe, London, &c. Sir T. Lawrence, in opening the subject, remarked that at present the Local Government Board could only recommend that a superannuation should be granted, and said the treatment of medical men after long public service should be such as would tempt men of high qualifications to become poor-law officers.—Dr. Rogers referred to a return showing that of 122 suitable applications to boards of guardians for superannuation fifty were refused, and mentioned instances of refusal after from forty to fifty years' service. He maintained that superannuation should in all fitting cases be compulsory, and that in the event of public opinion proving to be not sufficiently advanced for that the Local Government Board should, after due inquiry, have power to order superannuation.—Mr. Wickham Barnes, after thanking Mr. Dodson on behalf of the Poor-law Medical Officers' Association, and Poor-law Medical officers generally, for granting them this interview, stated that there were one or two points he wished to touch upon—namely, in reference to the returns asked for by Professor Thorold Rogers relating to the applicants for superannuation. Mr. Barnes stated that this return, however valuable, did not give any idea of the demand for superannuation, because before superannuation could be asked for the Poor-law medical officer must resign, which in the great majority of cases he was afraid to do. Referring to the promise of Mr. Sclater-Booth that any deserving case of long continuous service should receive his special attention towards urging on the claim for liberal superannuation, Mr. Barnes mentioned that the cases of Mr. Terry and Dr. Downes (both of whom had served forty years in their respective unions) were brought under the notice of the central authority, and though in one case a

Government inspector was sent down to press upon the guardians the necessity of superannuation, yet no good result followed. Mr. Sclater-Booth laid great stress upon continuous service, but Mr. Barnes thought it often acted prejudicially to the medical officer, who frequently outlived his friends at the Board, the new members having no sympathy with him. Referring to the argument that the Poor-law medical officer did not give his whole time to the service, Mr. Barnes stated that practically he did so, as he never could be absent from his post day or night without leaving a deputy in charge. —Mr. Hibbert asked what the deputation proposed to have done in cases where the service was not continuous in one district.—Dr. Rogers said that in his opinion each district should contribute.—Mr. Dodson, replying, said there were many difficulties connected with superannuation. One was that just referred to by Mr. Hibbert—namely, that in many cases the entire service was not continuous in one union. Another was that where officers did not devote their whole time to the work, it would not be easy to measure or apportion superannuation, and another that Poor-law authorities were the only local authorities that had the power of granting any superannuations. As regarded the suggestion that the Board should have power to arbitrate in the matter, he thought that a centralising measure of that kind would be viewed with considerable jealousy by local authorities. He wished to know whether it was proposed that the power of the Board should apply to existing medical officers, or only to such as might hereafter be appointed.—Dr. Rogers and Sir Trevor Lawrence expressed a desire that the power should be retrospective as well as prospective.—Mr. Dodson added that that would of course alter the conditions of service. The right hon. gentleman proceeded to say that he admitted that there was strength in the arguments which had been advanced, and promised that the matter should be carefully considered by the Board.—Mr. Thorold Rogers, M.P., afterwards pointed out that the guardians who paid medical officers the least were generally those who were most persistent in refusing superannuations.—The interview then terminated.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following is the proposed scheme of education and examination as prepared by the Education Committee and as amended by the Council of the College in committee. It has been adopted by the Council, but has been sent back to the committee for the filling up of certain details, and will then come before the Council previous to its final adoption: Each student shall be required to pass a Preliminary Examination and four Professional Examinations. The Preliminary Examination will include the English language (including grammar and composition), arithmetic (including vulgar and decimal fractions), algebra (including simple equations), geometry (first two books of Euclid), Latin, while the alternative subjects are Greek, French, and German. The First Professional Examination will include physics, the elements of chemistry, botany (descriptive and physiological), anatomy (human osteology), and practical pharmacy. Before admission to the Second Professional Examination candidates must produce evidence of having passed the First Professional Examination, and shall be examined in anatomy, bones, joints, muscles, and topographical anatomy of the viscera of the chest, abdomen and pelvis, histology, and the physiology of the circulatory, respiratory, and digestive systems; surgery —the signs, terminations, and treatment of inflammation, wounds, hæmorrhage, burns and scalds, ulcers, bandaging, chemistry, and materia medica. Before admission to the Third Professional Examination candidates must produce evidence of having passed the Second Examination, and will be examined in anatomy, physiology, and surgery. In like manner before being admitted to the Fourth or Final Professional Examination the candidate must prove that he has passed the Third Professional Examination, and shall then be examined in surgery—clinical surgery (including ophthalmic surgery, operative surgery, with surgical anatomy), medicine, midwifery and diseases of women, and medical jurisprudence. The examination in physics may be passed either at the Preliminary or the First Professional Examination, and the anatomical examinations of the second and subsequent years shall include dissection by the candidate of the parts indicated for his examination and demonstration by him of dissected parts.

MEDICAL NOTES IN PARLIAMENT.

IN the House of Lords on Monday, the Marquis of Huntly, in reply to a question by Lord Stanley of Alderley as to whether the Government would prohibit the importation of American hams and oleomargarine, said it was very doubtful if the Government had the power of prohibiting the articles named, but the matter had received careful attention.

Metropolitan Food Supply.

In the House of Commons on Friday, May 13th, Mr. Warton called attention to the injurious effect of the London market system in raising the price of food to the consumer, and showed that owing to combinations amongst salesmen and wholesale dealers the producer was often mulcted of his fair profit. The hon. member referred in particular to the unsatisfactory and wasteful arrangements for the sale and distribution of fish at Billingsgate. He had a motion on the subject, put down in the form of an amendment to Supply, but was unable to bring it forward, and at the close of the hon. member's speech the subject dropped. A Government resolution, authorising licences for supplying refreshments on Pullman railway cars, was agreed to.

Limerick Lunatic Asylum.

On Monday, in reply to Mr. O'Shaughnessy, Mr. Forster stated that two insane soldiers were sent from Limerick district prison to the county asylum, where they now remained. Only one was sent from Netley, and he was a native of the county. It would be difficult always to send military lunatics to the asylums to which they were naturally chargeable, but in individual cases the matter might be arranged by the Inspector of Asylums, as was done in this case.

The Basuto Wounded.

Mr. Grant-Duff stated to Mr. Summers that the Government knew nothing of the refusal by the Cape authorities to allow a French missionary to pass through the lines of the colonial forces with medicines and ambulance materials for the use of the Basuto wounded; but there was some correspondence some time ago with the French Missionary secretary, which would be found in the South African papers.

Volunteer Surgeons.

Mr. Donaldson-Hudson asked the Secretary of State for War whether Her Majesty's Government will accord to Volunteer battalion surgeons, after twelve years' service, the rank and title of surgeon-major, as in the case of Militia battalion surgeons; and whether they will give to them, under the Memorandum showing the principal changes in army organisation, &c., intended to take effect from 1st July, 1881, the same privileges upon retirement, after fifteen years' service, as to other officers of the Auxiliary Forces. Mr. Childers said Volunteer surgeons would be put on the same footing as Militia surgeons—viz., after twenty years' service they would receive a step of promotion, or in case of retirement after that period a step of honorary rank, and they would also be entitled to retain their rank on retirement.

The Alkali Bill.

Mr. Dodson, in answer to Mr. Warton, said complaints were made before the Royal Commissioners of the noxious gases emanating from cement works, but no sanitary authorities had made any representation to the Government on the subject.

The Vaccination Act.

On Tuesday, Mr. P. A. Taylor asked the Secretary of State for the Home Department whether it was the fact that the Warrington magistrates recently fined six persons £1 16*s.* 6*d.* each (including costs) under section 29 of the Vaccination Act, which section applies only to children under twelve months old, whereas the children in question were from three to six years old; whether this was not illegal; and whether he would direct that the fines be remitted.—Sir W. Harcourt replied that he only received the facts of this case this morning. It appeared that the conviction did take place under the 29th section of the Vaccination Act, and such a conviction, as suggested in the question, would be irregular and improper. The proceedings should have been under the 31st section. He would inquire into the matter and see what was to be done.

The Contagious Diseases Acts.

Mr. Hopwood gave notice that on Friday he will ask the Secretary of State for the Home Department, whether it is the fact that one or more surgeons employed in the compulsory examination of prostitutes under the Contagious Diseases Acts have been made justices of the peace, in order that they may carry out the Acts in a twofold capacity, administering and executing the law; whether he will state by what Minister such gentlemen were recommended to Her Majesty for appointment; whether he approves of such a confusion of duties; and whether the individuals in question should not be called upon to make their choice once for all to act either as magistrates or as surgeons.

The Case of Captain Chatterton.

On Thursday, Mr. Grantham asked the Secretary of State for India, as he has now received the promised reports from India on the case of Captain Chatterton, if he can tell the House whether by the report of the Medical Board, dated Sept 5th, 1868, signed by Surgeon-Major Peskett, Surgeons Lowdell and Condon, and Assistant-Surgeon Walsh, at Myne Tal, Captain Chatterton was not recommended to take twelve months leave of absence, for the purpose of returning to England to undergo an operation—viz., the division of the left tendo Achillis, on the ground that it was not safe to perform the operation in India; whether Surgeon-Major Powell, acting as garrison surgeon in Fort William, Calcutta, did not afterwards in April, 1869, confirm the above recommendation on the same ground; and whether the only report on which the despatch of June 5th, 1869, ordering the compulsory retirement of Captain Chatterton, was founded, and which practically alleged that he was shamming, was not that made in November or December, 1868, by Assistant-Surgeon Macdermott, who was shortly afterwards removed from the medical charge of that and other cases previously under his care; and how it was that Captain Chatterton was dismissed the army in 1869, on the report of an assistant-surgeon, when Captain Chatterton was acting on the reports of very eminent surgeons, made both before and after the report of the assistant-surgeon.—The Marquis of Hartington said it was true that the Medical Board recommended that Captain Chatterton should be sent to England to undergo an operation. It was afterwards found there was no occasion to send him home, as the operation was a very simple one and could be performed in India. The decision was overruled by a higher authority. The action taken with respect to Captain Chatterton was not only founded upon the report of Assistant-Surgeon Macdermott, but on the report of the Court of Inquiry. This Court took the evidence of several military officers of experience, and the report was considered by the Commander-in-chief in India, and on the report and after communication with the Field-Marshal Commanding-in-Chief, the Secretary of State placed Captain Chatterton on half-pay. He had not been dismissed; but out of fifteen years and a half, he had been six and a half on medical leave, and claimed another year. On these grounds the Government were entitled to place him on half-pay.

Animal Vaccine.

Dr. Cameron asked the President of the Local Government Board what has been done since Dr. Cory's appointment to provide for the public supply of vaccine lymph direct from the calf; whether the Vaccination Department has been, or will be, instructed to issue lymph free for purposes of revaccination to all medical men who may ask for it; and what steps have been taken to supply adequate hospital accommodation for small-pox cases, and so put an end to the public danger which arises from the treatment of so many cases of that disease in their own homes, and the consequent maintenance of so many separate foci of disease.—Mr. Dodson said great and unexpected difficulty had been found in obtaining the necessary premises for the new vaccine establishment, but premises had now been secured and the necessary alterations were being made without delay. Preliminary arrangements had been made, under which, as soon as the buildings were ready, a succession of calves would be provided. He feared it was not practicable for the department to undertake to supply lymph for revaccination to any medical man who might apply. Accommodation had been provided for a considerable number of convalescent patients on the property of the Metropolitan Asylums managers at Darenth, and owing to the unremitting and praiseworthy efforts of the managers 251 convalescent patients had been removed there in one week. Negotiations were going on with a view of obtaining additional accommodation, but the matter was one of great difficulty owing to the proceedings taken in some cases, and threatened in others, of closing existing hospitals or preventing them being opened.—Mr. Sclater-Booth asked whether the Government did not intend to propose legislation with a view to give the Asylums Board the power which they ought to have in order to carry out the objects of the Act of 1876?—Mr. Dodson said he would be glad to confer with any one who would advise him as to what were the requisite powers.—Dr. Cameron gave notice that he should take the first opportunity of drawing the attention of the House to the subject.

THE FARR TESTIMONIAL FUND.

A MEETING of the Executive Committee, charged with the promotion of the testimonial to Dr. William Farr, C.B., M.D., F.R.S., was held at Somerset House on Thursday afternoon last. It was announced that the net proceeds of the subscription amounted to £940. It was decided that this sum should be at once invested, and that every effort should be made to obtain the remaining £60 required to raise the Testimonial Fund to £1000, which it is proposed, at the request of Dr. Farr, to invest in the names of trustees for the benefit of his family. Any contributions towards meeting this deficiency will be thankfully acknowledged by the Honorary Secretary, Mr. Noel A. Humphreys, General Registrar Office, Somerset House.

DR. KIDD ON THE CASE OF THE EARL OF BEACONSFIELD.

To the Editor of THE LANCET.

SIR,—A few weeks' absence from England prevented my replying to the remarks in THE LANCET of April 16th.

The following information as to the case of the late Lord Beaconsfield may interest your readers. For some months before I had the honour of originally attending Lord Beaconsfield he had been attended by Sir William Jenner, but in vain, as his treatment failed to relieve. Sir William Gull also was called in, but his treatment again failed to relieve the patient. By the vigorous application of "one set of convictions" I was enabled to afford prompt and perfect relief for three years and a half.

Self-respect and regard for the honour of the medical profession prevented my noticing Sir William Gull's letter to the *Standard*, but I desire now in the proper place to protest against his accusation. I never advised "compromise;" my worst enemy never accused me of it. The aim and object of my little volume, "The Laws of Therapeutics," is to destroy compromise, to protest against eclecticism and schism, to bring the "catholic spirit" into medicine, gathering "all knowledge" to the aid of suffering humanity, and thus to help the introduction of scientific precision into therapeutics.

I remain, yours faithfully,

May 17th, 1881. J. KIDD, M.D.

P.S.—A week before THE LANCET drew my attention to the fact that my name still appeared in "The British Homœopathic Directory" and "The Homœopathic Medical Directory" for 1881, and on the list of the Medical Council of the Homœopathic Hospital, I wrote requesting that it might be withdrawn from all.

MEDICAL VOLUNTEERS.—The committee of the National Rifle Association have acceded to the request of the United Hospitals' Rifle Association, that their challenge cup should be shot for at Wimbledon, and have named July 18th for the competition. This cup is of the value of fifty guineas, and is offered for annual competition by members of the metropolitan hospitals, being efficient volunteers. Any further information will be readily given by the hon. secretary, Mr. G. S. Pollard, Guy's Hospital, S.E.

SKETCHES OF CONTINENTAL HOSPITALS.

(By our Special Correspondent.)

BOLOGNA.

THE rich city of Bologna, with its magnificent churches and ancient university, is well deserving of a lengthened description. It holds pre-eminence among the medical schools of Italy, not merely on account of its past scientific traditions, but because it boasts at the present day professors of the highest ability, and a clinical hospital which is on a par with the most recent and well-managed institutions of a similar character either in England, France, or Germany.

The old university in the Archiginnasio Antico is memorable as containing the anatomical theatre in which Morgagni and Galvani lectured. It is a room of noble proportions, lined with cedar, and capable of containing 150 people. The rostrum, or pulpit, in which the professor stood, is surmounted by a baldachino, the supports of which are two life-sized anatomical figures, the one showing the muscles and the other the vessels. Around the room are marble busts of the great masters in medicine and anatomy. At one end are ranged Hippocrates, Galen, and Malpighi, while opposite to them are Varolius and Arantius. The busts at one side of the theatre represent Mondinus, Argiolata, and Varignano, while those on the other recall the frames, if not the features, of Fracosatus, Bartolettus, and Taliacotius.

Galvani, who was Professor of Obstetrics in this University, made his celebrated experiments on the frog in this theatre in 1786. Here also lectured Malpighi, Valsalva, and Mariani, of all of whom handsome marble statues have been erected in the adjoining loggia. Near to them, also, is a monument of great curiosity. It is dedicated to Anna Maria Mansolini, a lady who once held the Chair of Anatomy in this University. Adjoining the anatomy theatre, which, by the way, is now no longer used, is the magnificent library in which the great linguist Mezzofanti laboured. The series of rooms in which the books are admirably arranged is upwards of 600 ft. in length, and is rich in the possession of the noblest works of all the languages of the world. The acquisition of forty-two languages and seventy dialects by the marvellous librarian may, thus, in some small degree, be accounted for.

The Archiginnasio Antico is now no longer used as a medical school; that has been removed with the other departments of literature and science to a handsome and extensive new range of buildings. At the present time there are between 400 and 500 medical students, about 250 of whom are following the systematic courses of the university, while the remainder are pursuing their clinical studies at the hospitals. The academical course is much more extended than in the British isles; of the six years required to be spent in the acquisition of professional knowledge three are occupied with systematic lectures in the university, and three in the various hospital cliniques. The latter part of the time is not necessarily spent at Bologna, but may be passed at Florence or Milan, where there are also large clinical hospitals, to which I shall call attention in a future article.

The museums of the university are of great value, and embrace an enormous number of dissections and admirably executed wax preparations. There are separate rooms for: 1. Osteology. 2. The muscular system. 3. The organs of circulation. 4. The nervous system. 5. Embryology. 6. Zoology. In addition, there is a pathological museum containing many valuable specimens of the various branches of external and internal pathology, which is especially rich in illustrations of the deformities produced by rachitis and osteo-malachia. The dissecting-room is small considering the number of students, and is provided with only twelve tables.

The Clinical Hospital of St. Ursula is just outside the walls of Bologna, and close to the Porta St. Vitale. It occupies a large extent of ground and has gardens around it, in which a large quantity of vegetables for the use of the patients is grown. The front of the hospital is plain and unimposing; the wards in that part are low, and such as might be expected in an old convent, but at the back of them a handsome new building was erected in 1870, capable of holding 220 beds, and this part is used for clinical instruction. The new wings are well arranged, and fitted with every convenience: the floors are of stone and kept remarkably clean; the windows in the wards are large, they are placed opposite to each other, and reach up to the ceiling. Over the head of each bed is an electric bell, so that a patient can without difficulty summon one of the nurses; the bedsteads are of iron, and each has a movable wooden footboard. The mattresses are of horsehair, and beneath them is an iron spring netting, so that the beds are thus made very comfortable. The waterclosets are clean and sweet, the seats being of white marble, and the supply of water ample. In each corridor is a bath-room, with a large metal bath. The larger wards have thirty-two beds, the smaller from six to eight. The nursing is done by paid nurses in ordinary dress, there being three to each of the larger wards and one to the smaller. Sisters of Charity are conspicuous by their absence; and, *mirabile dictu*, there are for the spiritual needs of this large hospital only two priests among the list of officers! It is evident that the hand of reform has thus been at work in this once priest-ridden place, which formerly was, next to Rome, the most important city of the Papal States, and which literally swarmed with monks of every order in Christendom. There are special wards for syphilis, with twenty-five beds for men and an equal number for women; the latter patients are kept under lock and key, and are very closely looked after. It is the practice to submit all prostitutes to periodical examination, but in spite of this, syphilitic diseases are of great frequency. The treatment adopted in such cases is much the same as that employed in England: mercury being used in the primary and iodide of potassium in the secondary forms. For leprosy and psoriasis an ointment of chrysophanic acid is in great repute; for eczema, unguentum picis is much in vogue.

There are no special wards for children. Simple fractures are mostly treated by immobilisation with plaster-of-Paris or silicate of potass bandages, and compound fractures by the apparatus of Scultetus with a many-tailed bandage, the limb being kept *in situ* by means of bran pads.

Resections of joints are said to be frequent, but I did not see any at the time of my visit. Lister's treatment is in general use, and I may mention two cases in which its good effects were manifest. One was the case of a man with an extensive lacerated wound of the axilla, in which rapid union by the first intention had taken place, and the other was a man with a crushed foot, for whom a Chopart's amputation had been performed three weeks previously, and in whom the stump was all but healed. In one case of compound fracture of the leg, where three fragments of the tibia had been extracted, the wound had been dressed with lint dipped in a solution of carbolic acid, and in six weeks union was perfect. Stone in the bladder is a common disease; Professor Loreta has had upwards of one hundred operations, and on this subject he has published a valuable memoir. He performs the lateral operation, but with special instruments designed by himself and manufactured by Lollini of Bologna. He uses a beaked knife with a movable back, and a staff which is centrally grooved, the said groove being broad at the handle and narrowing towards the point, so that when the knife is pushed along the staff it cannot slip out of the groove unless withdrawn by the operator; the movable arrangement of the back of the knife also allows the blade to be lateralised in the after part of the operation, so that the prostate is not entirely cut through. The instruments have been very successful in Professor Loreta's hands, and no doubt they will be found serviceable, especially by young or inexperienced operators.

Plenty of material is always on hand for clinical teaching, and large classes attend the visits of the various professors. The operating theatre will accommodate 150 students, and is well arranged and lighted. Around the walls are busts of former surgeons of eminence, as Alti, Venturoli, Rizzoli, Landi, Fabbri, and Magni. The instruments and surgical apparatus are abundant, and of the best quality. The thermo-cautery of Paquelin is a favourite instrument, particularly for malignant tumours of the uterus.

I might say much more in praise of this hospital, but I cannot conclude without calling attention to the excellent post-mortem room and pathological department, which are in a separate building at the back of the grounds, and approached by a long corridor with open windows on either side. In the theatre of this building the practical examination in surgery for the doctorate of the university is carried out, and candidates perform operations on the dead body,

not only in the presence of the examiners, but also before the general body of students. In one examination I witnessed the subject was tied up in a chair as though it were a living being, and among other operations resection of a portion of the lower jaw had to be performed. A more practical or searching system of examination is rarely to be met with than that which prevails for the degrees of the University of Bologna.

Obituary.

DR. HUMPHRY SANDWITH, C.B., D.C.L.

DR. HUMPHRY SANDWITH was born at Bridlington in 1822, and died in Paris on the 16th inst. He was the son of a well-known physician in Yorkshire, and in 1849 settled in practice at Constantinople. He was subsequently attached to Mr. Layard's expedition to Nineveh. In 1853 he joined General Beatson's force of Bashi-Bazouks on the Danube as medical officer, and was afterwards appointed chief of the medical staff of the force engaged in the defence of Kars, under Sir Fenwick Williams, an account of which he published under the title of the Siege of Kars. On the termination of the siege, General Mouravieff gave Dr. Sandwith his liberty in acknowledgment of the services he had rendered to the Russian wounded. For these services he was made a Companion of the Bath, and had the honorary degree of D.C.L. conferred on him by the University of Oxford. In 1857 he was appointed Colonial Secretary of Mauritius, but resigned the appointment in 1860. He contested unsuccessfully the Borough of Marylebone as an advanced Liberal in 1868. During the Servian and Russian campaigns he took an active part in organising hospitals and providing for the care of the wounded. He died in Paris after an illness of three weeks.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Fellows of the College on May 16th:—

Black, James Watt, M.D. Edin., Clarges-street.
Ewart, Joseph, M.D. St. And., Brighton.
Ewart, William, M.B. Camb., Curzon street.
Hall, Francis de Havilland, M.D. Lond., Queen Anne-st.
Hicks, J. Wale, M.D. Lond., Sidney College, Cambridge.
Lees, David Bridge, M.D. Camb., Thurloe Houses.
Potter, J. Baptiste, M.D. Edin., George-st., Hanover-sq.
Turner, Francis Charlewood, M.D. Camb., Finsbury-sq.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on Monday last:—

Bassett, W. F. Prichard, M.B. Ed., Bathurst, N. S. Wales.
Burton, William Henry, M.B. Toronto, Tottenham.
Grinling, John Campion, Barton-under-Needwood.
McCormick, Alexander, M.B. Edin., Edinburgh.
Verrey, Louis, M.D. Leipzig, Lausanne, Switzerland.
Wells, Charles M.D. Queen's Univ. Irel., Stowmarket.
Willett, George Gilmore Drake, Bristol.
Woodruff, John Winthrop, Wallington, Surrey.

The following gentlemen were admitted Members of the College on Tuesday last:—

Batson, Robert Sewell, Torrington, Devon.
Branson, G. Attanborough, L.R.C.P. Ed., Ladbroke-grove-rd.
Green, Harry, L.S.A., Cound, Shrewsbury.
Keys, Elias, Plymouth.
Maitland, Alfred Derwent, Hyde Park-square.
Minchinton, Henry James, Brixham, Devon.
Mivart, Fred. St. George, L.R.C.P. Ed., Devonport-street.
Newsholme, H. Wilkinson, Hellifield, near Leeds.
Pritchard, Owen, L.S.A., Anglesea.
Ramsden, Albert, Clapham.
Thane, Philip Thornton, Montague-street.
Thornton, Bertram, Margate.
Willis, Arthur, L.S.A., Soham, near Ely.
Willis, Arthur Keith, St. George's-road, Kilburn.

The following gentlemen were admitted Members on Wednesday last:—

Alexander, Frederick William, Hatton Garden.
Chard, R. A. Selway, Upton Lovell, Wilts.
Coutts, Joseph Alfred, Aldridge-road.
Currie, Oswald James, Blackheath.
Dixon, George Frederick, Market Harborough.
Jones, William Wansbrough, Macclesfield.
Owen, John Morgan, Fishguard, Pembroke.
Rigby, John, L.S.A., Preston.
Rowley, Charles, Barnsley.
Shore, Robert George, Stoke, Staffordshire.
Tripp, C. L. Howard, Tiverton, Devon.
Wood, Louis Edmund, Marlborough, Wilts.

The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners on the 12th, 13th, and 14th inst.:—

Stephen R. Thompson, Frederick W. C. Jones, Aubrey D. Chapple, Henry G. Read, Francis H. Julyan, Maitland Thompson, and Walter T. Strugnell, St. Bartholomew's Hospital; Alexander G. Andrews, Richard L. Holland, Francis E. Little, Arthur E. Hayward, and Frederick A. N. Bateman, St. George's Hospital; Lionel J. Shepherd, John Llewellyn, Henry R. Kenwood, and Alfred F. Peskett, London Hospital; William A. Aikin, James P. Martin, Alfred Linnell, Herbert R. Mead, William L. W. Marshall, Alfred L. Scott, and Arthur J. Carter, Guy's Hospital; Henry R. Hodges, Alfred G. Webster, George Wale, Sidney Herbert, and Anton H. Syree, King's College; John Scott, Cambridge and St. Bartholomew's Hospital; Frederick W. McDonogh, Herbert W. Hart, Herbert J. Pulling, and George S. Baker, Westminster Hospital; George H. F. Ferguson, Newcastle-on-Tyne and St. Thomas's Hospital; George Herbert, University College; Reginald B. Anderson, Middlesex Hospital.

Of the 144 candidates examined during last week 59 failed to satisfy the Board of Examiners, and were referred for three, and 10 candidates for six, months' further anatomical and physiological study. The Primary Examinations in Anatomy and Physiology for the Membership of the College, which commenced on April 1st, were brought to a close on the 14th inst. The total number of candidates examined was 543, which will be found to be greatly in excess of previous years. The rejections were 164. The First Part of the Professional Examination for the Fellowship commences this day (Friday), for which there are over 100 candidates.

The Library of the College will be closed on Friday and Saturday the 27th and 28th, and also on the following Monday, May 30th, for the Fellowship Examination.

UNIVERSITY OF CAMBRIDGE.—The following gentlemen passed the First Part of the Examination for the degree of M.B.:—

FIRST CLASS.
Fuller, H. R., B.A. Caius.

SECOND CLASS.

Bagshaw, M.A. St. John's.	Marshall, B.A. Clare.
Birdwood, B.A. St. Peter's.	Tooth, M.A. St. John's.
Browne, P. A., M.A. Trin.	Webber, B.A. Downing.
Howe, B.A. Clare.	

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on May 12th:—

Greenleaf, Alfred William, Alderney-street, Pimlico.
Kemm, Frederick St. John, London Hospital.

COLLEGE OF PHYSICIANS IN IRELAND.—At examinations held on the 9th inst. and succeeding days, the under-mentioned obtained the licences in Medicine and Midwifery of the College:—

Augustus James Arthur Browne, Louis John Patrick Carroll, Walter John Clarke, Edmond Francis Flynn, James Garland, Edward Gloster, Thomas Higgins, William Wall Jacobs, Patrick Andrew McDermott, Harry Strickland McGill, John Henry Cornelius Maw, George Cathcart Montray, William Joseph O'Keefe, and Thomas Kay Whitehead.

The following Licentiates have been admitted Members:—

Dane, Arthur Henry Cole, Surg. Bombay Army.	Marques, Lourenzo Pereira.
Lamb, H. Surg-Maj. A.M.D.	Nugent, Edward Joseph.
	Whitty, Patrick J.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At the April examinations the following obtained the licence in Surgery:—

Howard W. Acheson, James A. Baird, Charles D. Barrett, John Brady, John G. W. Bullock, Richard Callan, John P. J. Coolican, Patrick J. Dempsey, John B. Dunlop, Frederick D. Elderton, John S. Gelston, Walter Jones, Michael F. Kenna, Thomas W. Lewis, James C. McMullen, John H. O'D. McGuinness, Claude H. McSwiney, Michael C. Maloney, Edmond Murphy, George Nelis, Augustus Nickson, Francis R. O'Brien, Joseph F. O'Carroll, Edward H. O'Doherty, Michael J. O'Doherty, John A. C. Penny, John A. Powell, Robert Power, James Quirke, Thomas O'C. Redmond, Alexander Ross, Ventry A. J. Smith, Jones C. L. Stawell, Robert J. Tate, Macnamara M. Williamson, Augustus Woodroffe.

IT is expected that the Prince and Princess of Wales will be present to open the new Marylebone Infirmary at Notting-hill early next month.

THE subscriptions received at the festival dinner on the 13th inst. in aid of the funds of the Middlesex Hospital, Earl Derby in the chair, amounted to £3000.

DR. J. C. BRUMWELL has been nominated to the Commission of the Peace for Burnley.

THE salary of Dr. Young, medical officer of the Farnham Union, has been increased by £5 annually.

MR. J. S. STEELE, late Medical Officer in the Reigate Union, has received a superannuation allowance of £70 a year.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The next meeting has been fixed for Friday, May 20th (this day), at 7.30 P.M., at 1, Adam-street, Adelphi, when B. W. Richardson, M.D., F.R.S., will read a paper entitled "A Study of the Periods of Incubation of the Communicable Diseases."

THE Hospital Saturday collections in aid of the local medical charities were made at Birmingham last week at nearly all the manufactories and other places of business in the town. The total sum as yet received is £2947 13*s.* 9*d.* It may be interesting to know the amounts realised in previous years: 1873 (first year), £4215; 1874, £3850; 1875, £3606; 1876, £3484; 1877, £3069; 1878, £2994; 1879, £3330; 1880, £3666.

MEATH HOSPITAL, DUBLIN.—The following prizes were presented last week to students attending this hospital:—Medical Prizes: Reginald Mosely, first; Donald Grant, second; Macnamara Williams, third. Senior Surgical Prizes: Howard Atkinson, second; Frank J. Newell, third. Junior Surgical Prizes: Timothy Howard, first; James Bolger, second; Percy Newell, third. The gentleman who obtained the First Senior Surgical Prize was unable to be present at the distribution.

A MEETING in aid of the East London Hospital for Children and Dispensary for Women, Shadwell, was held at the Mansion House on Monday, under the presidency of the Lord Mayor. The immediate object of the meeting was to obtain further provision to meet the enormous amount of out-patient work. The claims of the institution were powerfully advocated by the chairman, by Dr. Andrew Clark and others, and it is to be hoped that the result of this effort will be to largely increase the means of usefulness of this valuable charity.

AT the last meeting of the Colchester Medical Society the following resolution was passed:—"This being the first meeting of the members of the Colchester Medical Society for the year 1881, they cannot help expressing their deep sorrow at the grave loss which they have sustained by the death of their hon. secretary, Mr. Edward Waylen. He was an intelligent and constant attendant at its meetings, a kind-hearted honourable man, a true and faithful friend, and a courteous and excellent secretary. This meeting begs to express its sympathy and condolence with his widow, to whom a copy of this resolution is now sent."

THE bazaar projected for the purpose of providing the funds necessary to meet the expenses of adding a new wing to the National Hospital for the Paralysed and Epileptic was opened on Tuesday at the Riding School, Albert Gate, by the Duchess of Wellington, in the absence of the Duchess of Edinburgh, who was prevented by her recent bereavement from attending. Several distinguished ladies assisted at the fair, and the sale, which was continued on the two following days, is likely to prove a success.

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES. Mr. Thomas Biggart, late of Baidlandhill, bequeathed £200 to the Western Infirmary, Glasgow. The late Colonel Gascoyne bequeathed £100 each to the Royal Hospital for Incurables and the National Hospital for the Paralysed and Epileptic. Mr. John Watt, late of Aberdeen, bequeathed the residue of his estate, in equal parts, to the Royal Infirmary and the Dispensary, Aberdeen. The will of Mr. Stephen Barron, late of Orsett-terrace, contains the following bequests: £4000 to St. Mary's Hospital, £2000 each to the Surrey County and the Brompton Consumption Hospitals, £1000 each to the Royal Hospital for Incurables, the Highgate Small-pox Hospital, the Great Northern Hospital, Ventnor Consumption Hospital, the Middlesex Hospital, Charing-cross Hospital, and the East London Hospital for Children. Surgeon-Major Newland, late of Carrickmines House, Co. Dublin, has bequeathed £1000 to Mercer's Hospital, £500 to the Hospital for Incurables, and £250 to the Medical Benevolent Fund Society of Ireland. The Misses Brooke have given £100 to the Adelaide Hospital, £50 to the Meath Hospital, and £50 to Coombe Lying-in Hospital, Dublin.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—The tenth annual dinner of this Society was given on Tuesday evening in Willis's Rooms, Mr. Greenish, president, in the chair. The loyal toasts were warmly greeted, after which Mr. Schacht proposed "Science," to which Dr. Richardson replied. Dr. Broadbent acknowledged the toast of the "Medical Profession." Professor Abel gave "Prosperity to the Pharmaceutical Society," noticing with pleasure the efforts of the organisation to associate with an examination testing the private study of candidates for admission another that should give proof of a satisfactory curriculum of practical study. Mr. Greenish, responding, ascribed the progress of the pharmacy of Great Britain, which, he said, would compare favourably with that of any other country, to the work of this Society.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest*

ALMARAM, Mr. A., has been appointed Resident Clinical Assistant at the Hospital for Consumption and Diseases of the Chest, Brompton, vice Welch, resigned.

BALLANCE, C. A., L.R.C.P., M.R.C.S.E., L.S.A.L., has been appointed Senior Assistant House-Physician to St. Thomas's Hospital.

BERRY, W., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer and Public Vaccinator for the Twelfth District of the Wisbech Union.

BOLTON, R. E. N., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Ballickmoyler and Newtown Dispensary Districts of the Carlow Union.

BUCKLE, J., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Bardfield District of the Dunmow Union.

COLLIER, M. P. M., M.R.C.S.E., L.S.A.L., has been appointed Junior Assistant House-Physician to St. Thomas's Hospital.

CUMMING, G. W. H., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Fourth District of the Chipping Sodbury Union.

DICKSON, Mr. T. A., has been appointed House-Surgeon to the Glasgow Royal Infirmary.

DODDS, W. J., M.D., D.Sc., has been appointed Assistant Medical Officer to the Birmingham Borough Asylum.

DOUGLAS, G. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Fourth District of the Ongar Union.

FOSTER, H. G., L.R.C.S.Ed., L.S.A.L., has been appointed Medical Officer of Health for the Swaffham (Norfolk) Rural Sanitary District, having previously been appointed Medical Officer of Health for the Wayland Rural Sanitary District, Civil Medical Examiner of Recruits for Regulars and Militia, and District Surgeon to the Great Eastern Railway, vice C. B. Wiles, resigned.

GRIFFIN, Dr. W., has been appointed Resident Clinical Assistant at the Hospital for Consumption and Diseases of the Chest, Brompton, vice Shearman, resigned.

HASLAM, W. F., M.R.C.S.E., L.S.A.L., has been appointed Resident Accoucheur to St. Thomas's Hospital.

HAYCROFT, Dr. R., has been appointed Professor of Physiology in Mason Science College, Birmingham.

HESLOP, T. P., M.D., F.R.C.P.L., J.P., has been appointed Consulting Physician to the Birmingham and Midland Skin and Lock Hospital.

HUDSON, G., M.D., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Sixth District of the Beverley Union.

JONES, Mr. H., has been appointed House-Surgeon to the Glasgow Royal Infirmary.

JORDAN, F., F.R.C.S., has been appointed Consulting Surgeon to the Birmingham and Midland Skin and Lock Hospital.

LAMONT, J., M.A., B.Sc., M.B., C.M., has been appointed House-Surgeon to the Glasgow Royal Infirmary.

LAWRIE, Mr. W. J., has been appointed House-Physician to the Glasgow Royal Infirmary.

LEWIS, F. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the First District of the Llandovery Union.

LINDSAY, Mr. R. W., has been appointed House-Surgeon to the Glasgow Royal Infirmary.

LONG, J. P., L.R.C.S.I., L.A.H.D., has been reappointed Medical Officer for the East Deptford District of the Greenwich Union.

LOW, C. A., M.R.C.S.E., L.S.A.L., has been appointed a District Surgeon to the City of London Lying-in Hospital, vice W. Burton, resigned.

LUNN, J. R., L.R.C.P.I., M.R.C.S.E., L.S.A.L., has been appointed Senior Resident Medical Officer to the new Marylebone Infirmary.

MCGEAGH, J. P., M.D., M.Ch., has been appointed Senior Assistant House-Surgeon to the Public Hospital and Dispensary, Sheffield.

MCLENNAN, Q., M.B., C.M., has been appointed House-Physician to the Glasgow Royal Infirmary.

MIDDLETON, W. H., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Visiting and Consulting Physician to the Mullingar Lunatic Asylum.

NOAKES, S. S., L.R.C.P.L., M.R.C.S.E., has been appointed Temporary Assistant Medical Officer to the County Asylum, Lancaster.

PEMBERTON, O., F.R.C.S., has been appointed Consulting Surgeon to the Birmingham and Midland Skin and Lock Hospital.

PEPPER, A. J., M.S., M.B., F.R.C.S., has been appointed Surgeon to the London Fever Hospital.

POTTS, J. A., M.B., M.R.C.S.E., has been appointed House-Surgeon to the Glasgow Royal Infirmary.

RAILTON, T. C., M.B., F.R.C.S.E., has been appointed Honorary Assistant Medical Officer of the Clinical Hospital, Cheetham-hill-road, Manchester.

READ, M., M.B., B.A., M.R.C.S.E., has been appointed Junior Resident Medical Officer at the Hospital for Sick Children, Great Ormond-street, vice F. G. D. Drewitt, M.B., M.A., M.R.C.P., resigned.

ROBERTS, N. E., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for No. 1 District of the Toxteth Union.

RUSSELL, J., M.D., F.R.C.P.L., J.P., has been appointed Consulting Physician to the Birmingham and Midland Skin and Lock Hospital.

SMITH, G., F.R.C.S.E., has been appointed Acting Surgeon to the Birmingham and Midland Skin and Lock Hospital.

SMITH, P., M.R.C.S.E., has been appointed Consulting Ophthalmic Surgeon to the Birmingham and Midland Skin and Lock Hospital.

SPICER, R. H. S., B.Sc., has been appointed Demonstrator of Comparative Anatomy and Botany at St. Mary's Hospital Medical School.

STEEL, Mr. R., has been appointed Clinical Assistant to the Glasgow Hospital and Dispensary for the Diseases of the Ear.

SUTTON, S. W., L.R.C.P., M.R.C.S.E., has been appointed Assistant House-Surgeon to St. Thomas's Hospital.

TAYLOR, J. W., F.R.C.S., has been appointed Acting Surgeon to the Birmingham and Midland Skin and Lock Hospital.

TREHERNE, F. H., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed a House-Surgeon to the West London Hospital, Hammersmith, vice D. G. L. Johnson, M.B., resigned.

WALKER, Mr. P. H., has been appointed House-Physician to the Glasgow Royal Infirmary.

WATSON, Mr. J. M., has been appointed House-Physician to the Glasgow Royal Infirmary.

WELFORD, C. H., M.B., C.M., has been appointed Senior House-Surgeon to the Sunderland Infirmary.

WHITEHOUSE, J., M.R.C.S.E., L.R.C.P.L., has been appointed Junior House-Surgeon to the Sunderland Infirmary.

WILLEY, C. H., M.B., M.R.C.S.E., has been appointed Junior House-Surgeon to the Borough Hospital, Birkenhead.

WILLIAMS, Mr. T. H., has been appointed House-Physician to the Glasgow Royal Infirmary.

WOODFORDE, W. T. G., M.D., has been reappointed Medical Officer of Health for the Berks Combined Sanitary Districts.

Births, Marriages, and Deaths.

BIRTHS.

BUSHELL.—On the 13th inst., at Edith-road, West Kensington, the wife of Dr. S. W. Bushell, Physician to H.B.M. Legation, Peking, of a son.

DALTON.—On the 12th inst., at Llandudno, the wife of Thomas Dalton, M.D., of a daughter.

GIBBONS.—On the 12th inst., at Cadogan-place, the wife of R. A Gibbons, M.D., of a son.

JAMISON.—On the 11th inst., at St. Helen's, Lancashire, the wife of Arthur Jamison, M.D., of a daughter.

ORWIN.—On the 10th inst., at Halifax, N.S., the wife of Surgeon-Major Orwin, Army Medical Department, of a son.

SANDILAND.—On the 14th inst., at 191, Southgate-road, N., the wife of A. H. Sandiland, M.R.C.S.E. & L.R.C.P.L., of a son.

SWANSON.—On the 13th inst., at Lawrence House, Yorks, the wife of George I. Swanson, M.D., of a son.

MARRIAGES.

ALLEN—MAW.—On the 11th inst., at St. Ann's Church, Bishop Auckland, R. G. Allen, L.R.C.P., M.R.C.S.E., of Belper, to Annie Blythe Maw, of Bishop Auckland.

LITTLE—MELLOR.—On the 12th inst., at West-end Congregational Church, Southport, Joseph Henry Little, M.B., C.M., of Woolton, to Agnes Elizabeth, youngest daughter of Wright Mellor, Esq., J.P. and D.L., of Cote Royd, Huddersfield.

DEATHS.

BOND.—On the 13th inst., at Stoke Newington, Edward Thornley Bond, M.R.C.S.E., L.S.A.L., in his 84th year.

CARR.—On the 12th February, at Machanga, Central Africa, of tetanus, William Ward Carr, M.D., formerly of Lee, Kent, eldest son of the late William Carr, M.D., also of Lee, aged 34.

JAMESON.—On the 16th inst., at Oakwood Lodge, Upper Norwood, Hugh Jameson, F.R.C.S., Deputy Inspector-General of Hospitals and Fleets (Retired), in his 77th year.

SANDWITH.—On the 16th inst., at Avenue Friedland, Paris, Humphry Sandwith, M.D., C.B., D.C.L., late Colonial Secretary of Mauritius, and Author of "The Siege of Kars," aged 58.

SHERLOCK.—On the 13th inst., at Powyke, Worcester, after a short illness, James Sherlock, M.D., for twenty-seven years Medical Superintendent of the Worcester County and City Lunatic Asylum, aged 58.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, May 19th, 1881.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
May 13	30·22	W.	54	48	90	75	44	..	Bright
,, 14	29·98	W.	55	50	91	69	45	..	Cloudy
,, 15	29·76	S.W.	60	53	88	64	47	..	Cloudy
,, 16	29·43	S.W.	52	49	82	59	41	·02	Raining
,, 17	29·97	S.W.	53	47	86	61	40	·02	Bright
,, 18	29·58	W.	55	54	94	64	51	·10	Raining
,, 19	29·60	W.	57	51	90	63	47	·20	Fine

Medical Diary for the ensuing Week.

Monday, May 23.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND SCIENCES.—Cantor Lectures: Mr. R. Brudenell Carter, "On Colour Blindness and its Influence upon various Industries."

Tuesday, May 24.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Professor Dewar, "On Non-Metallic Elements."

ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—5 P.M. Dr. Allen Thomson, "On some Bone Necklaces from the Andaman Islands."—Mr. E. H. Man, "On the Arts of the Andamanese and Nicobarese."—Mr. M. J. Walhouse, "On some Vestiges of Girl Sacrifices, Jar Burial, and Contracted Interments in India and the East."

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. Lawson Tait, "On Three Cases of Hepatotomy," and "On the Removal of the Uterine Appendages for the Arrest of Uterine Hæmorrhages."

Wednesday, May 25.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, May 26.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

ROYAL INSTITUTION.—3 P.M. Professor Tyndall, "On Magnetism."

Friday, May 27.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Professor H. E. Roscoe, "On Artificial Production of Indigo."

QUEKETT MICROSCOPICAL CLUB.—8 P.M. Ordinary Meeting.

CLINICAL SOCIETY OF LONDON.—8½ P.M. Dr. Wiltshire, "On a Case of Traumatic Rupture of an Ovarian Cyst."—Dr. T. C. Fox, "On Two Cases of Chromidrosis, in which a Blue-black Pigment exuded upon the Skin of the Circum-orbital Regions."—Mr. MacCormac, "On a Case of Reunited Fracture of the Olecranon Process, in which bony union was obtained by Suture of the Bones."—Dr. Sturge and Mr. Godlee, "On a Sequel to a Case of Stretching of the Facial Nerve."

Saturday, May 28.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Professor C. E. Turner, "On Russian Literature: Lermontoff."

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

THE Pass Examination for the diploma of Membership of the College was commenced on the 13th instant, when the following questions on Surgical Anatomy and the Principles and Practice of Surgery were submitted to the ninety-five candidates, who were required to answer at least four, including one of the first two, out of the six questions.

1. Describe the surfaces of the bones which enter into the formation of the wrist-joint and the synovial membrane.
2. Describe the relations of the popliteal artery.
3. What is the nature of the affection called ganglion? In what parts does it usually occur, and how would you treat it?
4. Describe the symptoms previous to an operation for hernia which would lead you to suspect mortification of a strangulated intestine, and the appearance during an operation which the intestine in such a state would present.
5. What cystic tumours commonly occur upon the surface of the head and face? How may they be distinguished from each other?
6. Give the usual causes and consequences of inflammation of the lymphatics of the arm.

The following were the questions on the Principles and Practice of Medicine:—

1. Enumerate and discuss the symptoms of hemiplegia and of paraplegia respectively, and point out the chief lesions to which these paralyses are due.
2. Describe the morbid anatomy of the lung in pulmonary phthisis; and give the clinical history of the disease.
3. What are the therapeutic uses of squill, ammoniacum, arsenic, and silver? What are the pharmacopœial preparations of these drugs, and what the composition and doses of these preparations? State the physiological effects, the medicinal uses, and the doses, of the dilute forms of hydrochloric, nitric, nitro-hydrochloric, sulphuric, and hydrocyanic acids.

"A NOTE ON INTENTION IN THE DETERMINATION OF SEX AND OF THE MENTAL AND PHYSICAL INHERITANCE OF CHILDREN."

To the Editor of THE LANCET.

SIR,—English readers who are interested in this subject will find the original paper (part of which found its way into THE LANCET last week from a German source) in the *Boston Medical and Surgical Journal*, vol. cii., p. 471. Mr. Fignet's theory will, I have little doubt, share the fate of so many other theories which are based on insufficient data, and in ignorance of the "law of error" which pervades statistics of observations of complicated natural phenomena. He has had a "run of luck," as they say at Monaco, but by no means an extraordinary one, and it would be interesting to know if his "fortune" is still true to him. Mr. Darwin, in giving the relative proportions of the sexes in domesticated animals, observes of cattle ("The Descent of Man," 2nd edition, p. 246): "Of cattle I have received returns from nine gentlemen of 962 births, too few to be trusted; these consisted of 477 bull-calves and 505 cow-calves—i.e., in the proportion of 94·4 males to 100 females. The Rev. W. D. Fox informs me that in 1867, out of 34 calves born on a farm in Derbyshire only one was a bull." I have often discussed this question with the breeders of shorthorns and racehorses in my native county, and the Yorkshire breeders have the credit of being the most experienced breeders in England, and therefore, probably, in the world, and I never met one who had any confidence in his powers to determine the sexes of his horses or cattle, while all of them were satisfied with their ability to develop or eliminate other physical qualities to almost an unlimited extent. I am, Sir, your obedient servant,

Bolton-row, Mayfair, May 9th, 1881. CHARLES ROBERTS.

RAILWAY SIGNAL-MEN.

IT is a disquieting consideration that the signal-men on railways are kept through long hours on duty in boxes sometimes a great distance from a station, but at points which are important to the safety of the traffic. An official of this class was recently found dead in his box. The engine-driver of a train found the danger signal on, and thus the occurrence was discovered in time to prevent an accident. Supposing he had found the "line-clear" signal on—which was quite as likely to happen—there would probably have been a serious accident. It is not to be expected that railway companies will see the need and wisdom of strengthening their staff so as to reduce the length of the hours on duty, and to establish a system of working in couples or of very frequent inspection; but the public may like to know the risks they run, and it is chiefly with a view to extend that information we, in common with our contemporaries, record the circumstance.

VACCINATION AND REVACCINATION.

To the Editor of THE LANCET.

SIR,—Can you give me some definite rules for the practice of revaccination? 1. At what age should revaccination first be practised? 2. If, on revaccination, a certain amount of irritation is produced for a few days at the punctures, but no distinct vesicle is formed, is this sufficient proof that the lymph has taken, but that the full course is aborted by previous protection? 3. Is one revaccination sufficient, or should it be repeated at intervals, and if so how frequently?

I am, Sir, yours obediently,

May 17th, 1881. M.R.C.S.

*** The rules of revaccination practised in this country are those adopted by the National Vaccine Establishment. Our correspondent should write to the secretary of the Local Government Board, Whitehall, and ask for a copy of the official memorandum on the subject. Here we may say briefly in respect to his questions—1. From fifteen to eighteen years of age, or, in immediate danger of small-pox, at twelve years of age. 2. "When persons who have once been efficiently vaccinated are, some years afterwards, revaccinated with effective lymph, there sometimes result vesicles which, as regards their course and that of the attendant areolæ, cannot be distinguished from the perfect results of primary vaccination. But far more usually the results are more or less modified by the influence of such previous vaccination. Often no true vesicles form, but merely papular elevations surrounded by areolæ; and these results, having attained their maximum on or before the fifth day, afterwards quickly decline. Or if vesicles form, their shape is apt to vary from that of the regular vesicle, and their course to be more rapid; so that their maturity is reached on or before the sixth day, their areolæ decline on or before the eighth day, and their scabbing begins correspondingly early. In either case the areolæ tend to diffuse themselves more widely and less regularly, and with more affection of the cellular membrane, than in primary vaccination; and the local changes are accompanied by much itching, often by some irritation of the axillary glands, and in some cases on the fourth or fifth day by considerable febrile disturbance."—(Gregory, revised by Cooly and Marson.) 3. In this country one efficient revaccination is held to be sufficient.—ED. L.

Mr. G. E. Pritchard.—1. Papers may be obtained from the College on application.—2. Bristowe, Guy and Ferrier, Farquharson, Ringer, Wilson, and Attfield.

C. K.—THE LANCET of Nov. 9th, 1878, and Jan. 9th, 1881.

CARBOLIC ACID IN THE TREATMENT OF WHOOPING-COUGH.

To the Editor of THE LANCET.

SIR,—I have read with interest Dr. Lee's papers upon whooping-cough, and am able to personally confirm his statements as to the efficacy of carbolic acid in the treatment of that disease. During last March I had been troubled with a cough. Early in April I found myself whooping in a most unmistakable manner; in fact, two medical friends voluntarily called my attention to the fact. Being the house-surgeon of a provincial infirmary, and constantly interviewing persons professionally, the desirability of taking a holiday was obvious to me.

Knowing the custom was very prevalent here of taking children to the gas-works when suffering from whooping-cough, the same idea occurred to me as to Dr. Lee as to what could possibly be the rationale of the benefit derived from the inhalation of gas-tar vapours. As I was daily in the habit of using the carbolic spray in the course of my professional duties, I made it a point of inhaling the spray for five minutes or so. On one day I had nineteen paroxysms of whooping; after three days of carbolic-acid treatment they were reduced to five. Since then I have quite recovered, never having taken medicine. No one fortunately took the affection, and I have had no need to absent myself. Judging from the effect upon myself, I think this treatment is worthy of trial. Doubtless if individual members of the profession will inquire into its value, we may ere long learn why and how it acts.

I am, Sir, yours faithfully,

Blackburn, May 7th, 1881. ROBERT H. FIRTH.

Medico.—We do not know to what new regulations our correspondent refers, as we have not seen any on the subject in the Army Circulars. If he will send us the date on which they were issued, we will look into the question.

The letter of *M. B.* on the lunacy question will appear in our next.

Vis Medicatrix had better consult our Students' number.

UTERINE DILATORS.

To the Editor of THE LANCET.

SIR,—In THE LANCET of May 14th we notice a new "uterine dilator," by Dr. James, of Thurloe-square. Kindly allow us to say that we have made for some time past identical instruments for Dr. Chambers, who has been using them successfully in several cases. We can show the instruments to anyone who wishes to see them by calling, having several made for the demand we have had for them.

We are, Sir, your obedient servants,

May 19th, 1881. MAYER & MELTZER.

"THE LAWS OF THERAPY."

To the Editor of THE LANCET.

SIR,—Though I have tried my utmost to understand the position you have taken up, I must confess that I am unable to do so. I am quite aware that the term "allopathist" does not correctly describe the practice of the orthodox practitioner—far from it,—and I did not make use of the term, though it is pretty well understood to whom the term applies, and what it means. But when the homœopathists are charged with having "two sets of convictions," it is to be presumed that those who make the charge have one set, or that they are at all events diametrically opposed to one; the uninitiated public will think that such is the case, and that that is the reason why the homœopathist and the so-called allopathist cannot meet in consultation; and if this be not so, it seems to me to be as difficult to understand the standing of the modern orthodox practitioner as it evidently is for him to understand that of the modern homœopathist.

When, about fifteen years ago, I was in Edinburgh for a short time, I went to hear a clinical lecture by a certain celebrated professor of medicine at the university—it was not Dr. Henderson,—and I was very much struck by a remark he made, "that it was well always to have a theory of the action of the remedies used, and that it was better to make a theory for oneself, even though it should be a false one, rather than to have no theory at all." This teaching rather startled me then, but it showed me what I now believe is quite true, that every educated practitioner has or is searching for a theory of the action of the remedies he uses, and that he does not satisfy himself with using remedies simply to attain a certain result.

When I was studying in the London schools I was taught the "evacuating" theory, the theory of "*contraria contrariis curantur*," the "chemical" theory, and the true "allopathic" theory,—i.e., as I understood it, the medicinal treatment of a healthy organ with a view of relieving thereby an unhealthy organ of physiological sympathy; all these I could understand and appreciate, with the exception, perhaps, of the first; but I was not taught the theory of *similia similibus curantur*, and in this respect I venture to think my medical education was very defective.

It certainly is not by any of the first four of these theories that the action of small doses of ipecacuanha, or Dover's powder, or picrotoxin, in the respective cases alluded to can be explained.

Dr. Murrell, in his very valuable remarks in the *Practitioner* on the use of Dover's powder and similar drugs in the treatment of the night sweating of phthisis, makes the following significant statement:—"It is a noteworthy fact that pathological sweating may be arrested not only by drugs that exert an inhibitory action on the sweat centres, but also by agents that in health promote perspiration." And, again, "Seeing that pathological sweating might be arrested by Dover's powder, an agent extensively employed as a diaphoretic, I determined to turn my attention to other sweat excitors." This very valuable indication led him to try several remedies in a manner which before a very recent period would have been thought of as being anything but orthodox. No arrangement of words can do away with the plain fact that there is here an application, which we can thoroughly appreciate, of a very useful rule.

I think myself that it will be found to be true that *all* drugs act on apparently opposite lines in larger and smaller doses, but I was not aware that this was recognised as a well-known fact. Nothing can be clearer than this, that Dr. Murrell did not perceive this as a universal law when he made his experiments some two or three years ago, but that he was led by the fact that in one case an agent which in health promoted perspiration arrested it in disease, to try other similar agencies; had he recognised a law, what need to mention one case as a warrant for a similar trial? Whenever we apply the law of gravitation we do not quote the fall of Newton's apple, or some similar illustration. No; it appears to me that all we *know* at present is that some few drugs act on apparently opposite lines in larger and smaller doses, and that we may only infer that what is true of some is true of all. Until this is clearly made out, it is only the formula of *similia similibus* which can help us to work out the problem in our dealing with disease, for we have only to know the action of the larger dose of a certain drug, which can always be ascertained by experiment in health, and to find it similar to the manifestations of disease, and we have it in our power to find out whether it will cure the disease or arrest its action by the use of the smaller dose of the same drug. This is what Dr. Murrell did with much success; and if it be, indeed, a well-known law of therapy that *all* drugs act on apparently opposite lines in large and small doses, many more orthodox practitioners will do likewise. It is, however, nothing more nor less than homœopathy, and homœopathy "pure and simple."

It was the neglect, nay, rather the repudiation, of this formula by the majority of practitioners which brought about a homœopathic sect, and there can be no doubt that when the beauty and simplicity and trustworthiness of this rule are more generally appreciated by the profession, homœopathy as a system will die out. The truth will be absorbed, and the name expire. While this is taking place, as it is undoubtedly now doing, would it not be better to try to heal divisions than to open up prejudices based on past misunderstandings?

I am, Sir, yours truly,

Scarborough, May 14th, 1881. F. FLINT, M.D.

To the Editor of THE LANCET.

SIR,—I thank you for your courteous reply to my note. You are quite justified in wondering at my ignorance, for it is quite true that I did not know "that *all* drugs act differently—and, as it may seem to the unscientific, on totally opposite lines—in different doses." But if that is the case—and far be it from me to deny it—then it would follow that the true therapeutic rule is to select for a case of disease a remedy that in one dose, say a large dose, will produce a morbid state similar to that disease, and administer it in another, say a small dose, which, according to your "universal law of therapy," will produce what "may seem to the unscientific" a totally opposite state. Thus in a case of vomiting from stomach derangement we should give, in a small dose, a medicine that is capable of causing, in a large dose, the stomach derangement that produces vomiting, and the opposite state—viz., cessation of the vomiting and restoration of the stomach to its normal state will ensue. But this is just the homœopathic therapeutic rule, so that, at all events, "the universal law of therapy" is not antagonistic, but, on the contrary, favourable to the homœopathic therapeutic rule. This rule is, I must repeat, no explanation of the *modus operandi* of medicines in disease; it is merely a rule for the solution of the remedy. "*Similia similibus curentur*" (not *curantur*, as your printer insists on making it), "let likes be treated by likes," not "like cures like," which would require quite other Latin.—I am, Sir, your obedient servant,

London, May 13th, 1881. R. E. DUDGEON.

CONCURRENT VARIOLA AND VACCINIA.

To the Editor of THE LANCET.

SIR,—Your correspondent, "In Perplexity," in your issue of last week, need not go out of his way to theorise about "worn-out lymph," as facts, which appear to be well-known to experienced vaccinators, are quite sufficient to explain the case. The protective areola in vaccinia is not complete till the ninth or tenth day in primary vaccination, but one or two days earlier (seventh or eighth) in secondary vaccination. The eruption of confluent variola is generally stated to appear on the third day after invasion, therefore in this case invasion took place on May 2nd, and at this date the variola had spread throughout his entire system, as shown by the constitutional signs of invasion, while the vaccinia (assuming it to have been a case of revaccination) was little more than local, being only at its sixth day, at least one day short of the time required for complete protection. It is probable, however, even in this case that the abundant eruption would subside, and not be accompanied by severe symptoms at maturation; and it is to be hoped that "In Perplexity" will give us the further history of the case. It would also be interesting to hear whether it was a case of vaccination or of revaccination.—I am, Sir, yours truly,

Torquay, May 16th, 1881. M.B.

To the Editor of THE LANCET.

SIR,—In the year 1870 I revaccinated two young ladies, sisters. I am unable just now to refer to the exact dates, but they were both vaccinated on a Thursday, and on the next Thursday I called to see the result. The younger sister's arm showed the operation to have been abortive, but the elder sister's was like a first vaccination.

On the Saturday following the inspection I was sent for to see the elder sister, who was said to be very ill. I found her in a high state of fever, and racked with pain in every joint. The next day (Sunday) the eruption of small-pox appeared, entirely covering the body, and she soon became almost one confluent mass. The case appeared to me to be nearly hopeless, when on the Friday the vesicles began to dry up. There was no secondary fever, no purulent stage, and the patient got rapidly well.

This case in its onset closely resembles the one given by "Perplexity" in this week's LANCET, and I should be glad if your correspondent will give the termination of his case, to see if there be an equal resemblance at the finish. I am, Sir, yours obediently,

Lechlade, May 16th, 1881. W. H. BOX.

To the Editor of THE LANCET.

SIR,—Had "In Perplexity" consulted section 86 of the "Medical Digest" he would have seen that the co-existence of vaccinia and variola was by no means unusual.—I am, Sir, yours, &c.,

May 19th, 1881. RICHARD NEALE, M.D. Lond.

A JAPANESE PHARMACOPŒIA.

THE Japanese Government having some years ago issued regulations for the examination of candidates for a licence to engage in practice as apothecaries, have supplemented that step by deciding to establish a standard pharmacopœia. A special commission charged with the duty of compiling the work has been appointed, and has commenced its labours. Hitherto, it appears, English, American, Dutch, and other pharmacopœias have been in use in Japan.

THE CASE OF CHRISTINA MARSHALL.

To the Editor of THE LANCET.

SIR,—I am glad to be able to report a favourable and timely change in this case. Towards the end of last week the girl became less apathetic. On Sunday last she took two teaspoonfuls of milk; on Monday a little cream every three hours; on Tuesday a few grapes and some beef-tea and milk; and this was repeated on Wednesday. Her pulse is now 84 and of better calibre, and she expresses herself as feeling a little improvement in her condition. I am, Sir, yours truly,

Bolton, May 12th, 1881. JAMES DOUGAL.

THE NATIONAL VACCINE ESTABLISHMENT AND ITS LYMPH.

To the Editor of THE LANCET.

SIR,—Permit me to thank "Public Vaccinator" for calling attention to the quality of the lymph supplied by the National Vaccine Establishment, and to express a wish that his appeal to the profession on the subject may receive a hearty response in your columns; for myself, I am sorry to state that my experience is in perfect accord with his own. I have on several occasions been supplied with lymph from that establishment which was nearly inert, and out of the total number vaccinated from a recent supply, there was but one successful case, if a single vesicle appearing and maturing six or seven days later than the usual course may be termed "successful." Being called to meet a neighbouring practitioner, who is also a public vaccinator, about that time, I took the opportunity of asking him his experience on the same subject, and he informed me that he had for some time given up sending for lymph to the National Vaccine Establishment owing to his want of success with it, and now preferred paying for it to a wholesale house which supplied it, and that the lymph he had so obtained had so far given him every satisfaction. I am, Sir, truly yours,

May 14th, 1881. P. V., No. 2.

To the Editor of THE LANCET.

SIR,—In answer to the letter of "Public Vaccinator" in this day's LANCET, I beg to inform him that I had a supply of lymph from the National Vaccine Establishment. I vaccinated four children with it on April 4th; three failed, and in the fourth case the vesicles came forward too soon, so that when brought for inspection there was no lymph to be had. As I had relied on these cases for a supply, I had to fall back on some points charged in October and kept in a half ounce bottle, and these cases were almost all successful. I think the National vaccine lymph is not so good as it used to be, for formerly I very seldom had an unsuccessful case.—I am, Sir, yours, &c.,

Bucks, May 14th, 1881. ANOTHER PUBLIC VACCINATOR.

To the Editor of THE LANCET.

SIR,—In reply to "A Public Vaccinator" in your last issue, I may say that about a fortnight ago I obtained from the National Vaccine Establishment two tubes of lymph, with which I operated on ten infants without being successful in a single instance. On reference to my register, I find that during the past two years the proportion of my unsuccessful cases has been 1 per cent., and, curiously enough, in each of the unsuccessful cases lymph from the National Vaccine Establishment was used.—I am, Sir, yours obediently,

Lewes, May 16th, 1881. ANOTHER PUBLIC VACCINATOR.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Crocker, London; Dr. W. R. Smith, Cheltenham; Dr. B. Fenwick, London; Dr. Saundby, Birmingham; Dr. Thomson, Ulverstone; Dr. Percival Hunt, India; Mr. Mann, Glasgow; Mr. R. Park, Glasgow; Mr. Box, Lechlade; Messrs. Hirst and Co.; Mr. Colston, New Whittington; Mr. P. Chalmers, London; Mr. Rideal, Thetford; Mr. C. Foster, Leeds; Dr. Strange, Worcester; Dr. Moullin, London; Dr. Imlach, Liverpool; Dr. Macnaughton Jones, Cork; Messrs. Dunlop and Arthur, Bradford; Mr. G. Meadows, Hastings; Messrs. Pridham and Slater, London; Dr. Dougal, Bolton; Mr. Gopal Shivram, Bombay; Mr. Taylerson, Whitby; Dr. Dudgeon, London; Dr. T. Gilbart Smith, London; Dr. Finny, Dublin; Dr. Nicholson, Greenwich; Mr. Wilmot, London; Surgeon-Major Curran, Ashton-under-Lyne; Dr. Collins, Oxford; Dr. Flint, Scarborough; Dr. Ferrier, London; Mr. Dobbin, London; Dr. W. B. Burn, Balham; Mr. Berridge, Loughborough; Mr. Wilmot, Bradford; Mr. Davis, Cefn; Mr. Moulding, Liverpool; Mr. Leatham, Doncaster; Dr. Flinn, Brownhills; Mr. MacCormac, London; Mr. Dolan, Halifax; Mr. Petrie, London; Mr. Richardson, London; Mr. Pollard, London; Mr. Gilbert, London; Mr. McWatters, Nowgong; Mr. Reid, London; Mr. Greene, Liverpool; Dr. Barnes, Eye; Dr. Hunt, Wolverhampton; Dr. Neale, Hampstead; Mr. Mason, Pontypool; Messrs. A. and C. Black, Edinburgh; Mr. Symmons; Mr. C. R. Buckland, Sydney; Mr. Jackson, Blackburn; Mr. Evans, London; Sir Wm. Miller, M.B., Londonderry; Mr. Barker, Hull; Mr. A. B. Joy, London; Mr. Eastes; Dr. Blackwood, Philadelphia; Fleet-Surgeon Hargue; Another Public Vaccinator; Lynedale, Newcastle-on-Tyne; Medico; The Secretary of the Victoria Institute; M.R.C.S.; A Country G.P.; P.V. No. 2; A Voice from the Wilderness; Sanitas B; R. T. J.; O. U. I.; M.B. Univ. Dub., L.R.C.S.I.; A General Practitioner; Medicus; Qualified Assistant certified to Vaccinate; A Reader of THE LANCET; R. B., Lowestoft; M.B.; F.R.C.S. (Exam.); Senex; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Gowan, Anston; Mr. Fotherick, Wolverhampton; Mr. Dickson, Bootle; Dr. Gill, Canterbury; Dr. Swanson, York; Dr. Parsons, Hastings; Miss Goodbar, Leicester; Mr. Taylor, Buxton; Mr. Hunt Hall; Mr. Townsend, Exeter; Messrs. Stickland and Rowe, London; Sir H. Thompson, London; Messrs. Wolley and Sons, Manchester; Mr. Frampton, Weston-super-Mare; Mr. Cartwright, Oswestry; Miss Thompson, Oldham; Mr. Fearson, Leamington; Mr. Hinde; Mr. Forbes, Fordoun; Mr. Nicholls, Walsall; Mr. Buckrell, Burton-on-Trent; Mrs. Allsop, Manchester; Mr. Astley, East Langdon; Mr. Young, Bridgwater; Mr. Taylor, Teignmouth; Mr. Jesse, Henbury; Mr. Saunders, London; Mr. Egar, Woking; Mr. Warters, Derby; Mr. Pattrick, Moesham; Messrs. Keith and Co., Edinburgh; Mr. Somerville, Edinburgh; Mrs. Tubbs, Ealing; Mr. Jones, London; Surgeon; A. B. C., Paddington; Medicus, Earls Barton; Medicus, Taunton; E. P., Camberwell; M. S.; J. G., Brighton; Assistant, Burton-on-Trent; W. C., Hackney; Cymro, Brecon; T. S.; M.R.C.S., Grantham; Ergo; Doctor, South Kensington; A. B. C., Eastbourne; Surgeon M.; Index; Omega, Leeds; M.R.C.S., Norwich; Alpha, Uxbridge-road; M.R.C.S., Southwark; T. H. S., Great Torrington; Medicus, Manchester; Medicus, Coventry; C. B., Oxford; W. W., Birmingham; W. D., Green Heys; Omega; Beta, Hartest; A. B., Hull; Sartorius, Upper Norwood; J. W., Huddersfield; Spes; Alpha, Long-acre; T. P. M. D.; Pendente M.D.

The Asylum Journal (Fort Canje), South of India Observer, South Wales Daily Telegram, Japan Mail, North British Daily Mail; Westminster and Chelsea News, Pioneer Glasgow Herald, Italian Times, Spalding Free Press, Western Mail, &c., have been received.

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